

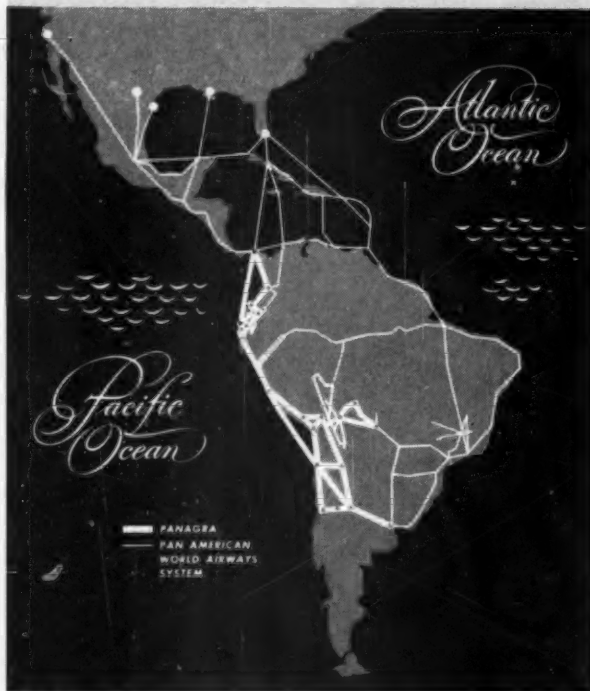
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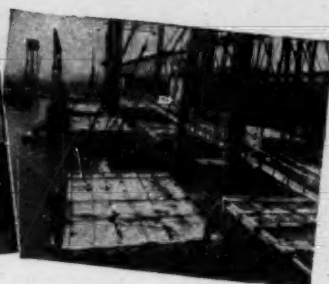
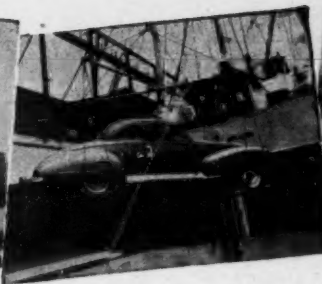
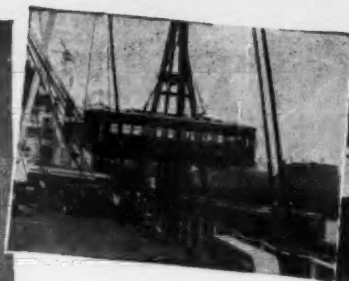
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THE American Merchant Marine Conference, sponsored by The Propeller Club of the United States in conjunction with its Twentieth Annual Convention, will be held in New York, October 16, 17 and 18th, 1946.

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HANGAR Chatter

THAT John F. Budd brainchild—National Aviation Week—is gaining momentum. Leaders in aviation are climbing on the bandwagon, and from this vantage point its creation appears quite promising. You'll be hearing more about National Aviation Week, no doubt—real soon.

Keep your eye peeled next month for AIR TRANSPORTATION's second annual Foreign Trade Number. Into it have gone several months of preparation, all aimed at highlighting the new link forged by air transportation in international trade. Readers of this magazine have become accustomed to "firsts" here. Well, here's an advance tip: there's another big "first" on tap for the Foreign Trade Number. Incidentally, it will be one of the official publications at the three-day National Foreign Trade Convention in New York this Fall.

Thanks to Milton Reynolds, chairman of the board of the Reynolds Pen Company, Chicago, for this plug: "I believe Air Transportation is covering well an important field that is going to become more and more vital to American business."

And while we're recording some back-patting (not without chest dilating and ego primping), we may as well make mention of recent letters from two officials of as many non-scheduled airlines: M. T. Rogers, Jr., vice president of Southern Cargo Airlines, Vandalia, Ohio; and Philip A. Mann, traffic manager of American Air Transport, Miami Springs, Florida. Said Rogers:

"Having run across one of your magazines, I was surprised to see such a fine magazine published in the interest of air transportation, and I am sure that anyone who has had the opportunity to read it was greatly impressed also."

And from Mann:

"I have had the pleasure in the past few weeks of seeing your May and June issues of AIR TRANSPORTATION, and I believe that it is a great aid to those of us engaged in non-scheduled air operations."

Those birds who said Postmaster General Robert E. Hannegan's Waldorf-Astoria speech (September 7, 1945) in which he came out for a domestic five-cent air mail service was all political palaver and nothing else, can go sit on their tails and gnash beaks. Nickel air mail will be a reality within a very few days. Now we're looking forward to the day when all first class mail will be airborne.

We're indebted to Dick Kirschbaum, aviation editor of The Newark Evening News for this snub. It seems that over at the Newark Airport cafeteria a request for "one hamburger to go" is translated by the counterman as "one Russian hamburger." If you've a desire to stick your neck out and ask why the Russky monicker, you'll be informed: "Because it takes a walk."

Vol. 9
No. 3

AIR
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Sept.
1946

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THE COVER—With the famous George Washington Bridge, which connects Manhattan with New Jersey, in the foreground, an eastward bound transport heads for LaGuardia Airport. This picture appears here through the courtesy of the Air Transport Association.

JOHN F. BUDD, Editor and Publisher

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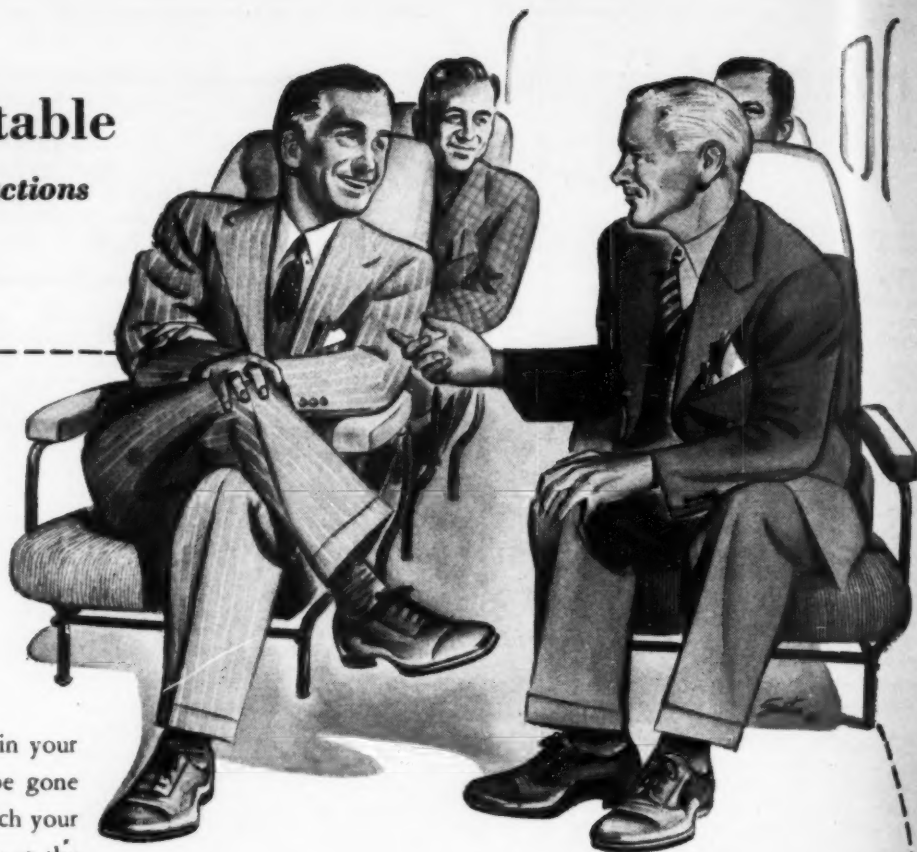
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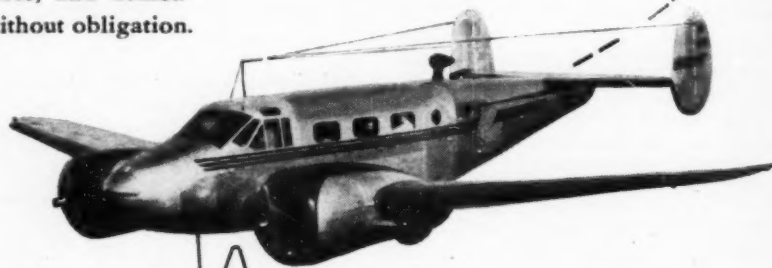


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Air Mail Era

By ROBERT RAMSPECK

Executive Vice President

Air Transport Association of America



ROBERT RAMSPECK

FIFTY years ago an experiment was commenced. It was the free delivery of mail in the rural sections of our country. When first proposed, many members of Congress hooted at the idea. They said it would be too expensive. They opposed it.

Time has proved them to be wrong. It has paid dividends—perhaps not so much in money as in ways more important. Life in the country has been greatly benefited. Property values have been increased. Loneliness has been pushed away. General knowledge has been advanced. People have been made happy. Such things count more than money.

The end is not yet in sight. Many of us will not live to see some of the improvements to come, but I have no doubt that the service for our people, received from its Postal System, will continue to advance and to improve. The day may even come when mail will

The diehards who turned up their noses at air mail are wearing red faces today. But progress hasn't ended by any means! There's more ahead!

be delivered on rural routes by air. Certainly we will see the day when Motor Postoffices will traverse many of our highways, thus rendering improved service to our people.

When our forefathers fought for and won their independence they adopted a policy for the Postal Service. It was established by Benjamin Franklin, a man of great vision. Under England, the postal service had been used as a means of taxation. Franklin and the new nation rejected that policy. It was a policy of service.

This historic policy of our Postal System is based upon three principles:

1. The mails shall be transmitted by private enterprise.
2. The newest and speediest means of communication and transport shall be actively encouraged and made available for postal patrons.
3. The object of the Postal System shall be service, regardless of cost.

It is true that as far back as 1799 the Government operated stage coaches, but this was abandoned soon and private enterprise was encouraged by payments for carrying the mails. The Government first operated the telegraph, but soon left it for private enterprise.

Our Postal Service has promoted travel by many means. As I have said, it assisted private enterprise to establish stage coaches. It helped establish steamship routes to foreign countries. It paid the railroads sums far in excess of the postage received, to assist in the

establishment of that means of transport, in the early days of the construction of this means of travel. Thus the first two principles have been followed down through the years by the Postal Service.

Many battles have been fought to change the third principle. However, today the Postal Service renders some services at less than cost, because it is believed that this practice contributes to the general welfare. Many services at first operated at a loss have later become profitable.

When I was approached with a proposal that I resign from the Congress to enter private employment, one of the considerations that persuaded me was that the position offered made it possible for me to continue my close association with those in the Postal Service.

The Air Transport Association is a trade association. It represents about 25 scheduled airlines. They carry the air mail. I am therefore quite interested in the Postal Service.

Air mail was first inaugurated 28 years ago when an initial appropriation of \$100,000 was made available. It was largely due to the efforts of Senator McKellar that this money was appropriated.

Just as the proposed rural delivery service was hooted at, so did the skeptics in the United States Senate oppose Senator McKellar's proposal. They said no airplane could carry mail; that it would not be even a seven-day wonder; that it



AIR MAIL FOR EVERYWHERE—With domestic air mail down to five cents per ounce, increased traffic is expected. Scenes like the one above will be even more numerous.

would be a waste of money. Yet last year, the profits from domestic air mail alone, repaid the initial appropriation 300 times.

Like the early stage coach days, the first air mail was carried by Government-operated planes. This was abandoned and the task turned over to private enterprise. Like some other services of the Postal System, air mail failed to pay its way for a number of years. The Government spent large sums encouraging this new method of transport, just as it had done for the railroads in their early history.

In the past several years, however, the profits from air mail have repaid all those expenditures—and more. Today, the most profitable operation the Postal Service has is air mail.

The rate of postage for domestic air mail has been reduced to five cents, effective October 1.* Even at that rate, a pound of air mail will yield a greater

*See Page 40.

profit to the Postal System than a pound of first-class mail transported by surface with three cents postage.

Here once more, we see the historic policy of the Postal Service in operation. First it was used to encourage and develop a new means of transport-by-air. At first the cost—to the Postal Service—exceeded the revenue. Now it is profitable in a money sense, even at the new nickel rate.

However, I want to point out some of the more valuable incidents resulting from this historic policy. Air mail has brought intangible benefits to millions of people. It has brought greater security to our nation. It has brought people closer together from the standpoint of time.

Millions of parents, wives, sweethearts and friends used air mail during the recent war to communicate quickly with their sons, husbands, sweethearts and friends scattered over this old globe. It helped the morale of the troops and kept up the courage of the loved ones at home. That was worth more than money.

There was another, and perhaps an even greater beneficial result of this wise policy of encouraging the development of a new and faster means of travel and communication. When we entered the war, our Army was without adequate air transport planes. The airlines, at that time, had about 359 planes. One-half of these were turned over to the Army. With them went trained pilots and ground crews. Thus was the Army Transport Command started.

When the Japs landed in the islands near Alaska, these planes were used to rush troops, guns, supplies and equipment to the danger zone. The Japs were stopped. Perhaps an invasion of our own country was averted. Who knows?

When Rommel was winning in Africa,



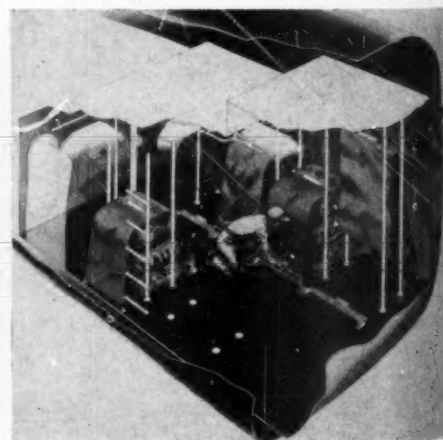
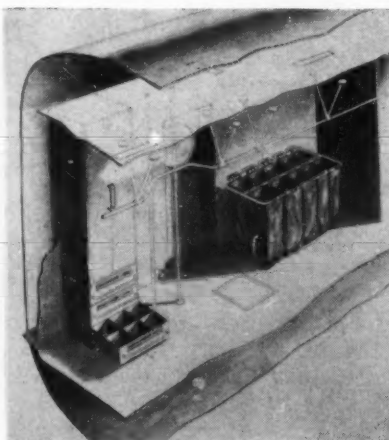
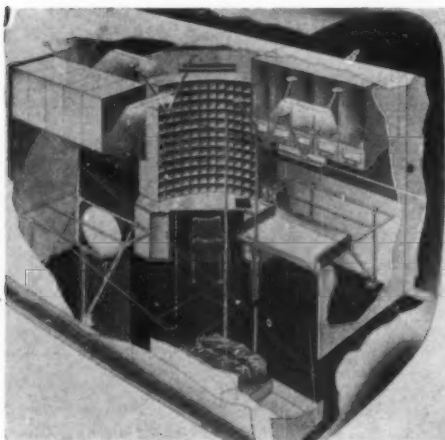
MAIL IN FLIGHT—They hooted at air mail, but last year profits from domestic air mail alone repaid the initial appropriation 18 years ago of \$100,000 some 300 times. Above is a Western Air Lines Skymaster transporting mail over the Rockies.

Montgomery, of the British Army, needed ammunition for anti-tank guns. It could not reach him in time by surface transport. These planes took that ammunition to Montgomery. Rommel was stopped. The war was shortened. Many thousands of lives were saved. . . . How? . . . Why?

Because, a few years before, the historic policy of the Postal Service had encouraged the development of a new and faster means of transportation—air transportation. It was done by paying private enterprise to carry the mail—paying them more than the service returned in postage. It pays now. Who would now deny that this policy was wise?

The Postal System had a net profit of about \$160,000,000 at the close of the fiscal year 1945. This year (June 30, 1946), this profit was gone, and a deficit of a larger amount had been created. This change was brought about

(Concluded on Page 50)



PACKET MAILCAR—"Next year," writes Mr. Ramspeck, "we hope to see legislation passed providing a system of air parcel post." These cutaway pictures show the three sections of the Fairchild Packet Mailcar which was fully described in the April issue of this magazine. Left to right are the working, rear, and forward sections. The Packet, which can handle six-ton loads on 500-mile hops, can be developed for parcel post carriage, too.

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BOEING STRATOFREIGHTER



PARADOXICAL as it seems, the Stratofreighter, a new all-cargo airplane recently announced by the Boeing Aircraft Company, will cost the least because it costs the most. Its ability to operate at the unprecedented low direct cost—including amortization of purchase price—of 3.9 cents per ton-mile may be traced directly to its purchase price of approximately \$1,100,000. It's a story worth telling.

It begins with efficient equipment, a primary requisite in reconciling the apparent inconsistencies of a large capital investment and a low operating cost. Long aware of this fact, Boeing engineers have designed the *Stratofreighter* for efficiency. It has been patterned after a proved airplane—the C-97 military transport—which was Boeing's answer to the Army's request for a high capacity, long range, high-speed, altitude-conditioned troop, cargo, and casualty transport.

What is the mark of efficiency in an airplane? Reduced to equation form, it may be defined as a ratio of ton-miles carried per hour over dollars ex-

pended in purchase price and continued operating costs. This ratio, in turn, involves three basic factors; aerodynamic design, payload capacity and utilization.

Superior aerodynamic design and maximum payload capacity decrease direct operating costs when the airplane is flying, thus increasing efficiency. Utilization, on the other hand, is the ability to fly a maximum number of hours a day. Only when an airplane is in the air can it take advantage of its aerodynamic qualities, payload capacity, and revenue potential. Obviously, then, to attain a high degree of efficiency, much design consideration must be placed on reducing time on the ground.

This may be accomplished in several ways. Ease of maintenance is one.

Simplified maintenance was a basic

By FRED B. COLLINS

Sales Manager

BOEING AIRCRAFT COMPANY

concept of the *Stratofreighter*. For example, any or the four 3,500 horsepower Pratt and Whitney, Wasp Major engines, with which the *Stratofreighter* will be powered, may be quickly removed. In order to speed overhaul and engine change procedures, they also have been designed for interchangeability.

A large open area directly below the control cabin permits easy inspection and servicing of control cables and electric wiring, while the placement of aileron controls and the automatic pilot at the rear of the wing stub greatly facilitates maintenance. Elsewhere in the *Stratofreighter* electric motor, brake panels and other control devices are so located that they may be readily inspected, changed or serviced with ease.

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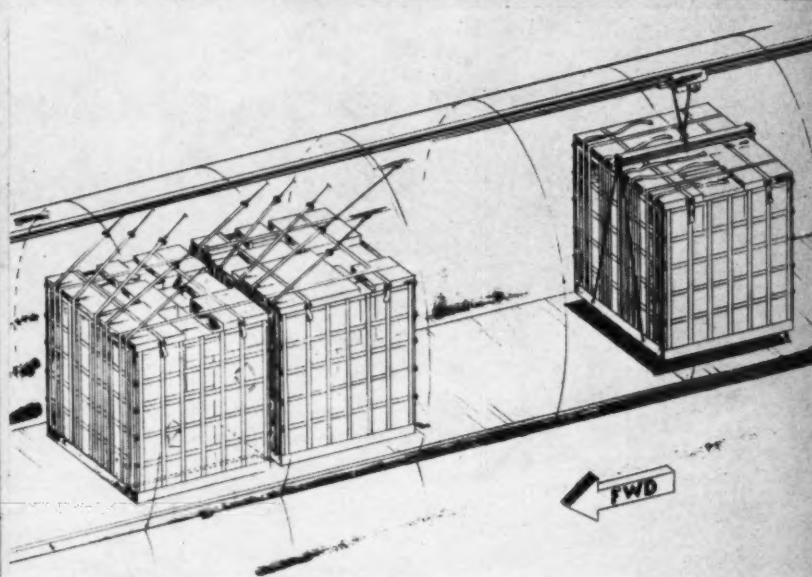
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CARGO GARGANTUA—Side view of the Boeing Stratofreighter (upper left), new double-deck, four-engine cargo plane. When it goes into service it will be the largest and fastest commercial air freighter in the world. Volume nearly doubles that of an average boxcar. Cargo doors are arranged to allow four trucks to load simultaneously. The Stratofreighter will operate at 3.9 cents per ton-mile. . . . **ALL FOR FREIGHT**—Looking aft (upper right) on the Stratofreighter's upper deck cargo compartment. With a usable volume of 4,320 cubic feet, it is the largest of four separate compartments on the giant plane. Total usable volume of the Stratofreighter is 6,140 cubic feet. . . . **SPEED PLUS EFFICIENCY**—Traversing the entire length of the 74½-foot main deck cargo compartment on an overhead rail (lower left), this electrically powered hoist is capable of hoisting preloaded pallets up to 5,000 pounds. . . . **HERE'S HOW IT'S DONE**—Sketch shows how preloaded pallets move along the powered overhead rail.

alone, however, does not produce a totally efficient airplane. With an ever growing emphasis on increased speed, airline operators have discovered that by an efficient loading design the ideal airplane can save many hours of flying time while still on the ground.

If airplane A can be fully loaded, in say 45 minutes, while airplane B requires two hours loading time for the same amount of cargo, then the first airplane can be in the air and flying one hour and 15 minutes before the second one leaves the ground. Converted into distance at the *Stratofreighter's* average speed of 325 miles an hour, this time differential results in a net gain

of over 400 miles for the airplane designed to be loaded rapidly and efficiently.

Armed with these facts, Boeing set about to develop rapid loading features on the *Stratofreighter*.

Available to prospective purchasers of this airplane will be two basic systems: pallet and bin loading. Pallet, the faster of the two, and perhaps fastest of all current systems, is a prepacking method in which specially designed 100-pound pallets may be loaded with as much as 5,000 pounds of cargo and be ready for hoisting into the *Stratofreighter* upon its arrival at the field. Designed to carry eleven such pallets in

the 74½-foot upper deck compartment, the big Boeing cargo carrier can be loaded in approximately 20 minutes.

If desired, the operator may have the *Stratofreighter* fitted for bin loading. Designed for quick installation or removal in order to maintain maximum loading versatility, the bins (11 in the standard airplane) will consist of nylon strap partitions, aluminum gate posts, and a nylon gate. Partitions will be secured to the floor, walls, and ceiling of the airplane. Although not as rapid as the pallet system, bin loading is still fast compared to current standards. Depending upon the number of men used,

(Concluded on Page 50)

Shippers are Speeding these Commodities by BRANIFF Air-FREIGHT

Aircraft parts
Automotive parts
Baby chicks
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Candy
Canned goods
Celery
Cigars
Clothing
Cotton samples
D. D. T.
Diplomatic material
Drugs
Electrical supplies
Engines
Fresh flowers
Frozen foods
Household goods
Hose—nylon and silk
Jewelry
Ladies belts
Ladies dresses and accessories
Lighters and parts
Medicines
Metal and glass bracelets
Movie supplies
Mowers
Newspapers
Office supplies
Oil paintings
Oil well machinery
Optical supplies
Penicillin
Personal effects
Phonograph records
Poultry (dressed and iced)
Printed matter
Radio parts
Rayon material
Rubber blocks
Rubber goods
Seafood and fish
Sealing tape
Sheet steel
Shirts
Shoes
Toys
Ventilators

(Advertisement)



It's only a habit—

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Braniff Air-Freight is especially designed for regular day-in and day-out shipments... not just for special "rush" orders. Reduced tariffs offer volume reductions. Whether your shipment weighs 25 or 5,000 pounds, Braniff gives you "special" service on regular schedules or contract operations.



BRANIFF *Air-FREIGHT*

Phone Braniff Airways office at any city shown on this map, or write
Braniff Airways General Traffic Office, Love Field, Dallas 9, Texas.

Contrasts in **LATIN AMERICA**



By **HARRY E. SEANOR**
*Vice President
Mack Truck Company*

IN Latin America the ox plods along at one mile an hour. In a day it gets about as far as an airplane flies in 10 minutes.

And yet in vast areas of the rich and still largely undeveloped continent the only alternative to the airlines are transport methods unchanged in a thousand years.

In Ecuador, the pleasant towns of Loja and Cuenca, only 84 miles from each other, are five days apart by trail, though only 45 minutes by air.

Contrasts so sharply drawn grow out of a curious paradox. In Europe and North America, Western civilization worked slowly through the road and rail eras before coming to the airplane. Transport facilities kept pace with, and sometimes run ahead of the demands of commerce. Latin America, however, catapulted straight from the age of the mule and the oxcart to the swift airlines, skipping over all the intermediate stages. In a sense, therefore, Latin America, having tied the continent together on long through routes, must now intensively develop her short hauls.

In a 23,000-mile flying trip around Latin America, a businessman can learn a lot about the economy of the continent. My business took me to Mack Truck distributors in all the principal cities of Latin America. Leaving Miami late last summer Pan American *Clippers* sped me down the East coast by way of Havana, Barranquilla, Maracaibo, Caracas, Curacao, Maturin, Belem, Recife, Bahia, Rio de Janeiro, Sao Paulo, Porto Alegre, Montevideo and back to Rio. From Rio the *Clippers* took me to Buenos Aires. Here I changed to Panagra and flew across the Andes to Santi-

*A business executive's impressions after flying 23,000 miles
on a discerning tour of the Good Neighbor lands*

ago, then Arequipa, Lima, Antofagasta, Quito, Cali, Bogota, Medellin, Balboa and back home.

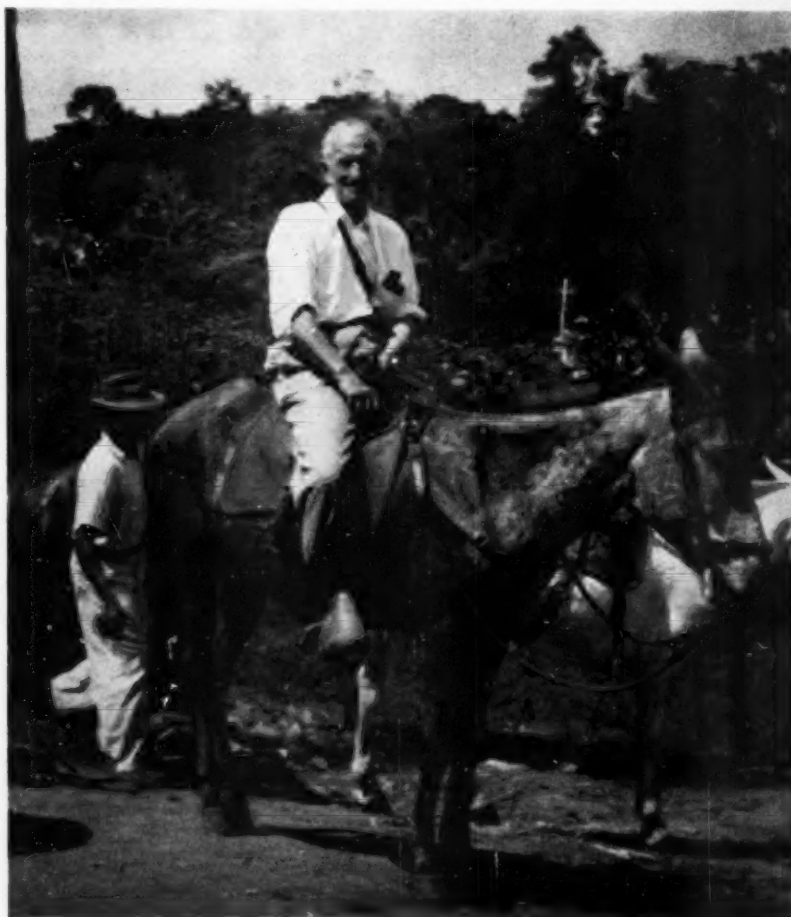
It was in Ilheos, just south of Sao Salvador, Brazil, that I went a few hundred miles inland by a 60-year-old narrow gauge railroad, by car, and then on muleback to a prime example of what poor transport means to a nation's economy.

Only a few miles from the coast in the State of Bahia potential riches grow on the brown red-yellow cocoa trees. And yet these riches are not fully harvested. More than 200,000 tons of cocoa

rot on the trees every year, for there is no way out from part of this cocoa country except by mule. The trees, wild and untended, produce their yearly crop to the benefit of no one.

Beef, too, is raised in this area. Each year from Northern Minas Geras and Southern Bahia, ranchers drive cattle 400 miles over rough trails to Sao Salvador. Cattle that leave the lush grazing grounds inland from Ilheos weighing 1,000 pounds will arrive in Sao Salvador weighing only 800. Transport by motor trucks would, of course, avoid this loss.

Away to the North, almost on the



The author on muleback.

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Bridges in Latin America reach a high standard, but many of the roads are woefully bad.

Venezuelan border, only 87 miles from a market, another cattle raising area has an even worse transport problem. Paradoxical as it may sound in a world of food shortages, the cattle are raised solely for their hides. Meat is a useless surplus. For lack of refrigeration, roads and highway transport, ranchers destroy it.

Such instances multiplied many times throughout the continent, add up to vast new wealth waiting to be tapped and brought into the main stream of world commerce. Today American businessmen traveling through Latin America are greeted on every hand with unmistakable signs of an economic renaissance unrivaled in the long and colorful history of the continent. But like our own enormous expansion of the last century, the blossoming of Latin America

depends to a large extent on the development of transport.

As vast and variable as any in the world, the transport problem cannot be licked overnight. But the work of the new facilities which are pouring into Latin America now that the war is over will, I think, be made more effective if Latin Americans keep two principles in mind. The available transport should be used (1) to feed the airlines, and (2) to feed the rivers to seaboard.

A large number of productive areas can be developed intensively with relatively short roads in isolated regions. Trucks used on these shorter routes as gathering units for the airlines and the rivers would develop economically the varied centers of wealth throughout the continent. Greatly expanded air cargo service would then weave these areas to-

gether. On the rivers, power boats must replace the dugout canoes which still are the only means of transport in many areas.

In Nicaragua, for instance, Mack Truck Company recently sold 15-ton heavy duty trucks for the development of a gold mine in an inaccessible spot high in the mountains. The trucks were dismantled, loaded on planes and flown to the mines. There they were reassembled and put to work. They now do the heavy short-haul jobs; the airliners are the connecting link with the outside world.

In any cultural or economic development the most important thing is, of course, to get people moving. As roads are built, the magic of transportation will bring the more abundant life to Latin America as it has everywhere else.

Natives use primitive methods in breaking rock for road building.





Most of the heavy carrying for road building operations is done by the ancient handcart.

Pan American World Airways can be justifiably proud of the part it has played in revolutionizing trade relationships. By making Latin America air conscious, it has sparked this renaissance.

Urgently needed throughout most of Latin America is an information program designed to acquaint industry and governments alike with the latest technical developments in the transport field. One of the most useful things that could be done would be the sponsoring of road construction shows, exhibiting the latest road building machinery.

I was startled to see workmen breaking rocks in some parts of Latin America using methods unchanged since 218 B.C. when Hannibal built a road across the Alps in his historic attempt to wreak the vengeance of Carthage on the Roman people.

Selecting a large rock, two men build a hot fire around it until the rock is thoroughly heated. This may take anywhere from half-a-day to a day, or longer, depending on the size of the rock. When it is thoroughly heated, water is dashed over it and, amid a great crackling and hissing of steam, the rock

breaks into several large pieces. These pieces are hauled by hand carts, sometimes several miles, then broken up by sledge hammers into pieces small enough to use.

Although limited at times by such primitive and expensive methods, there can be no doubt of the determination of the Latin American governments to drive roads through their countries. Enthusiasm is encountered on every side. And more important, along with this enthusiasm is the means with which to translate it into action. Although economists differ on the precise amount of the dollar credits the Latin Americans have piled up during the war, they all agree that it is a sizable sum. No one doubts that a large portion of this sum will be spent on highway and airport development.

In the cultivation of Latin American business, the one almost indispensable tool is the airplane. My four-month trip would have taken at least a year by any other means of transport. Indeed, the *Clippers* speed you around so fast that a man has to gear himself to the pace. There is no lost motion in the schedule; there can be no lost motion in your work.

By the time I reached Buenos Aires, I had covered so many cities and countries and written so much business that I wished I had taken two or three secretaries with me.

As Mack Truck Company continues to expand its export business—we plan a 500 percent increase over our prewar exports—the convenience and dependability of the airline will continue to aid us, not only in knitting our worldwide organization together but in many small though highly important ways as well.

Recently we delivered several heavy duty trucks to a South American utility company. One of the trucks was damaged in operation and, as it happened the particular spare part was not available. It was a serious matter, for the one truck could hold up the work of the others. We sent the spare part from New York via *Clipper* express and had the truck back in operation in a short time. Air express makes emergency Mack Service just around the corner. Air-truck transport promises many new horizons for Latin America.

This article appears here through the cooperation of *New Horizons*.

Pan American Seeks Domestic Routes Using Rainbows, Stratocruisers

Holding forth the 430-mile-an-hour Republic *Rainbow* and the 340-mile-an-hour Boeing *Stratocruiser*, Pan American World Airways this month put in a bid with the Civil Aeronautics Board for United States routes which would link 13 cities now served by the airline on overseas routes.

These cities are: New York, Boston, Philadelphia, Baltimore-Washington, Chicago, Detroit, Miami, New Orleans, Houston, Seattle, San Francisco, and Los Angeles. The big Republic and Boeing planes are expected to be delivered to Pan

American during the latter part of 1947.

PAA pointed out that in planning its domestic services it does not propose to add any new terminals to the cities from which its overseas services are at the present time authorized. Since 10 major airlines have been authorized to compete with it on overseas routes, PAA states, it would link the United States terminals with high-speed domestic service operating in competition with the domestic airlines recently permitted to extend overseas. The airline added that its fares would be lower than

those now offered by other companies.

Both the *Rainbow* and the *Stratocruiser* are four-engine aircraft.* Passenger capacity of the Republic plane is 46, and that of the Boeing plane 80 (at night, 41 seats and 18 berths). Each ship has an operational range of 3,500 miles. Payload of the *Rainbow* is 11,600 pounds, and of the *Stratocruiser* 21,610 pounds.

*Complete descriptions of the Boeing *Stratocruiser* and the Republic *Rainbow* were published respectively in the January, 1945 and October, 1945 issues of *AIR TRANSPORTATION*.



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CLIPPER EXPRESS
to 46 lands**

Alaska	Haiti
Antigua, BWI	Hawaii
Argentina	Honduras
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Belgium	Mexico
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Bolivia	Nicaragua
Brazil	Panama
Canal Zone	Paraguay
Chile	Peru
Colombia	Portugal
Costa Rica	Puerto Rico
Cuba	St. Lucia, BWI
Curaçao, NWI	St. Thomas, VI
Czechoslovakia	Senegal
Dominican Republic	Surinam
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You cut down on warehousing when you ship by Clipper

**One of ten good reasons why both
your consignee and you will find
Clipper Express a good business buy**



1. Speeds delivery.
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6. Creates new markets, widens old ones.
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**Be sure to ask your consignee to
specify Clipper Express**

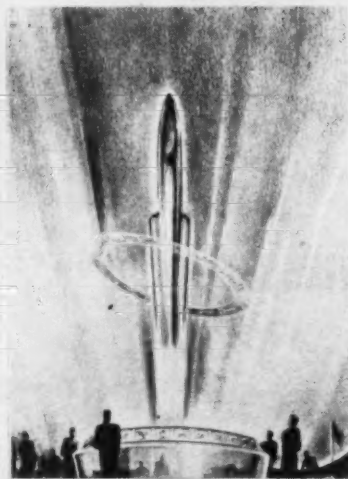
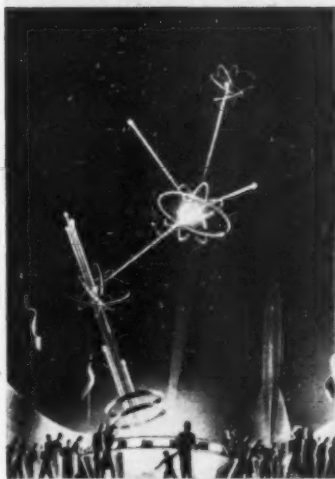
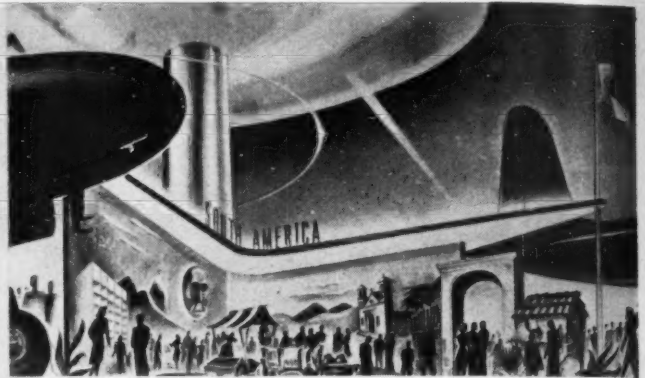
PAN AMERICAN WORLD AIRWAYS



*The System of the
Flying Clippers*

FIRST ACROSS THE PACIFIC • FIRST ACROSS THE ATLANTIC
FIRST THROUGHOUT LATIN AMERICA

★ *Spotlight on* CLEVELAND



MODEL personal aircraft installation (above, left), showing facilities for both land and sea planes.

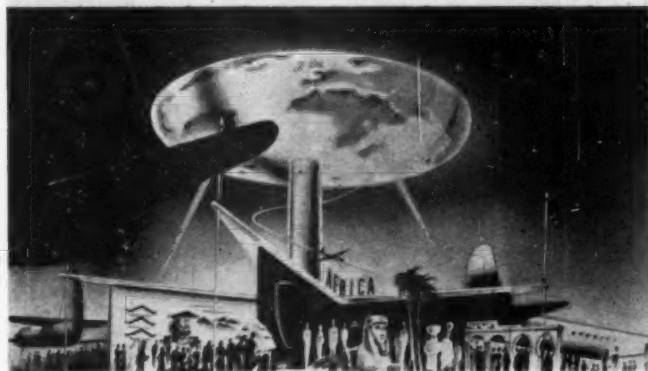
UNDER an air map of the world projected from the South Pole is the South American Section of the International Bazaar.

THE now universally recognized symbols of nuclear fission (left), an application of atomic energy to aircraft.

ROCKET symbolizing air travel of the future (left). This is the theme of the Engines-Accessories-Suppliers Section.

SHADES of Cleopatra! Surrounded by all air transport types, in authentic Egyptian atmosphere (below, left), is the Sphinx.

NOR are rotary wing aircraft forgotten. Shown here (below, right) are helicopters in various forms of operation.



WHEN the First Annual National Aircraft Show takes its bow in Cleveland on November 15-24, all the phases of American air power, air commerce, and the aircraft industry will be unveiled for the public. As it looks from this vantage point, the show will be a big-time affair—one which probably will take top position among all similar ventures to date.

The exhibitions are operated on a non-profit basis, responsible to a national show policy committee of the Aircraft Industries Association, Inc., national trade organization of the manu-

facturing industry. In addition to the AIA, the show is supported by the airlines, Army, Navy, and all leading and independent aviation organizations.

What are the objectives of National Aircraft Shows? Among other things they will demonstrate:

1. The new significance of the airplane as an instrument of international policy.
2. The progress of international air transport.
3. Current aircraft, from experimental models, through personal planes, to giant transports.

4. The latest developments in aerial navigation, radar control, model facilities essential to the continued growth of all types of aircraft, radar-directed projectiles, etc.

And if it's information on the latest developments in atomic research you want, there will be a section devoted to that, too.

In the formative stage are plans for a round-the-world flight starting and finishing in Cleveland, with a new speed record as the objective; and transcontinental jet plane flights with much the same hope in mind.

Question: HOW TO BOOST AIR FREIGHT PROFITS?

Answer: EQUIP WITH CARGO VERSIONS
OF *Martin 2-0-2!*



FAST LOADING is made possible by big rear door for bulk goods, smaller front entrance for lighter items. Martin Cargo Loader is being used at front door.

HERE'S how to move far ahead of crowding competition in the air freight field. Equip with cargo-carrying versions of the efficient Martin 2-0-2. You'll be able to offer faster service, make more trips, thanks to the 280 m.p.h. cruising speed of the 2-0-2. You'll save turn-around time and operating costs because of the 2-0-2's ease of ground service and maintenance. You'll gain added dependability provided by new developments of design and construction. And you'll have a useful load of more than 6 tons . . . a cargo area 7' high, 9' 2" wide, 45' 5" long at your disposal.

MANY OPTIONAL INSTALLATIONS

To accommodate all sizes and weights of cargo, from the smallest to the largest items, Martin offers a number of

optional installations for bins, shelves, other types of cargo compartments, including a refrigerated compartment. In addition, provision has been made for heating or cooling the entire cargo area to desired temperatures.

ORDER NOW FOR '47 DELIVERY

These highly efficient cargo-carriers are now being built to fill initial airline orders. Other orders are being negotiated. Moreover, 16 domestic and foreign airlines have bought passenger versions of Martin twin-engine aircraft. Result: quantity production, permitting low original cost. Get the full facts on this outstanding new cargo-carrier. Find out how it can cut costs and build profits for you. THE GLENN L. MARTIN COMPANY, BALTIMORE 3, MARYLAND

Martin
AIRCRAFT

Builders of Dependable Aircraft Since 1909

BEECH Uncovers THE BONANZA

TO quote Walter H. Beech, president of the Beech Aircraft Corporation: "The new Beechcraft *Bonanza* for the first time in aviation history incorporates in a single airplane the element of luxurious, high-speed transportation with an operating cost that is so low that anyone of even moderate financial means can afford to utilize the airplane for the solution of his transportation requirements."

The *Bonanza* (Model 35) is a four-place, all-metal, low-wing, cantilever monoplane with fully retractable tri-cycle landing gear, solid cabin top, and full equipment. With a range of 750 miles, it cruises at 175 miles per hour. Payload is 780 pounds. It will be delivered, says Beech, complete for day and night flight.

In the company's research of the possible uses of the *Bonanza* as a business vehicle, some interesting cost breakdowns were brought to light. According to comparative travel cost statistics covering salaries of traveling personnel and direct transportation costs, if a firm pays an employee as much as \$96 a week, it can better afford to send him alone on a trip in a *Bonanza* with a paid pilot than to have him take a train to his destination. In the case of two traveling-employees,



even if the earnings of each are as low as \$20 per week, it would be profitable for the company to utilize the plane than to send them by time-consuming surface means. Finally, three employees routed from plant to plant, or from city to city, could go in a *Bonanza* more cheaply than by rail coach, and the salary costs do not have to be taken into consideration.

"The Beechcraft is not a revolutionary new vehicle," says the company. "It will not present new problems for sociologists to solve. It will

not revolutionize the life of a country. But, it does provide a new standard of personal transportation which has never previously been achieved.

"Like the early automobiles, previous airplanes of high performance have had an overall operating cost which has made their use prohibitive to the average citizen. When charter operators attempted to put them into service of the public, the high operating costs made the price per mile so unattractive that very few people could afford to use them. Thus the utility or the usage of the airplane was very low and this factor created an additional element in the high operating cost. The operator was forced to ask such high prices that his airplanes were used only in the most extreme emergencies or by people to whom cost was not an important factor. As a result of these conditions, the charter business never became an important one either to the operator or to anyone else."

The direct operating cost of the *Bonanza*, states Beech, when used approximately 100 hours per month, is less than 1½ cents per passenger-mile, counting three passengers and not including the pilot—which is something that will be eyed by charter and air taxi operators.

Selling price?—It's \$7,345 fly-away Wichita.

Equipment?—Here's the low-down:

(Concluded on Page 50)



ESTIMATED OPERATING COSTS OF THE BEECH BONANZA

(Owner Operated)

Item	Description	200 Hours Per Year	300 Hours Per Year	400 Hours Per Year	900 Hours Per Year	1200 Hours Per Year
FUEL COST Gasoline consumption based on 115 h.p. cruising power and includes normal engine warm up, taxiing, and climb; oil consumption estimated as .075 gallon per hour of operation and includes 20% allowance for normal oil changes.	Gasoline—10 gal. @ \$.22/gal.	\$ 2.20	\$ 2.20	\$ 2.20	\$ 2.20	\$ 2.20
	Oil—.075 gal. @ \$1.20/gal. ....	.09	.09	.09	.09	.09
	TOTAL	\$ 2.29	\$ 2.29	\$ 2.29	\$ 2.29	\$ 2.29
DEPRECIATION COST Engine depreciation based on 4000 hours flying time. Total depreciation of hull is spread over a five-year period with a 30% residual value.	Engine Depreciation Per Hour	\$.50	\$.50	\$.50	\$.50	\$.50
	Hull Depreciation Per Hour	3.50	2.33	1.17	.78	.58
	TOTAL	\$ 4.00	\$ 2.83	\$ 1.67	\$ 1.28	\$ 1.08
MAINTENANCE Hangar cost based on \$300 rental cost per year. Repair parts and minor overhaul cost based on Beech records. Major overhaul based on 600 hours of operation.	Hangar Rental and Minor Check-up Per Hour.....	\$ 2.25	\$ 1.50	\$.75	\$.50	\$.37
	Repair Parts and Major Overhaul.....	1.50	1.50	1.50	1.50	1.50
	TOTAL	\$ 3.75	\$ 3.00	\$ 2.25	\$ 2.00	\$ 1.87
INSURANCE Equipment Insurance includes all risk and crash. Public Liability is on a \$25000/\$50000 basis; Property Damage is for \$50000. Passenger Liability is on \$10000 per seat for three seats.	Equipment Insurance	\$ 3.67	\$ 2.45	\$ 1.23	\$.82	\$.61
	Public Liability .....	.08	.05	.03	.02	.01
	Property Damage .....	.10	.07	.04	.03	.02
	Passenger Insurance .....	.31	.20	.10	.07	.05
	TOTAL	\$ 4.16	\$ 2.77	\$ 1.40	\$.94	\$.69
TOTAL COST PER HOUR OF OPERATION		\$14.20	\$10.89	\$ 7.61	\$ 6.51	\$ 5.93
TOTAL COST PER PASSENGER HOUR	Passenger Hour Based on Four-Passenger basis.....	\$ 3.55	\$ 2.72	\$ 1.90	\$ 1.63	\$ 1.48
TOTAL COST PER AIRPLANE MILE		\$ 0.095	\$ 0.073	\$ 0.051	\$ 0.043	\$ 0.040
TOTAL COST PER PASSENGER MILE	Passenger Mile Based on *150 M.P.H. Av. Speed.....	\$ 0.024	\$ 0.018	\$ 0.013	\$ 0.011	\$ 0.010

(Owner Operated Commercial Service)

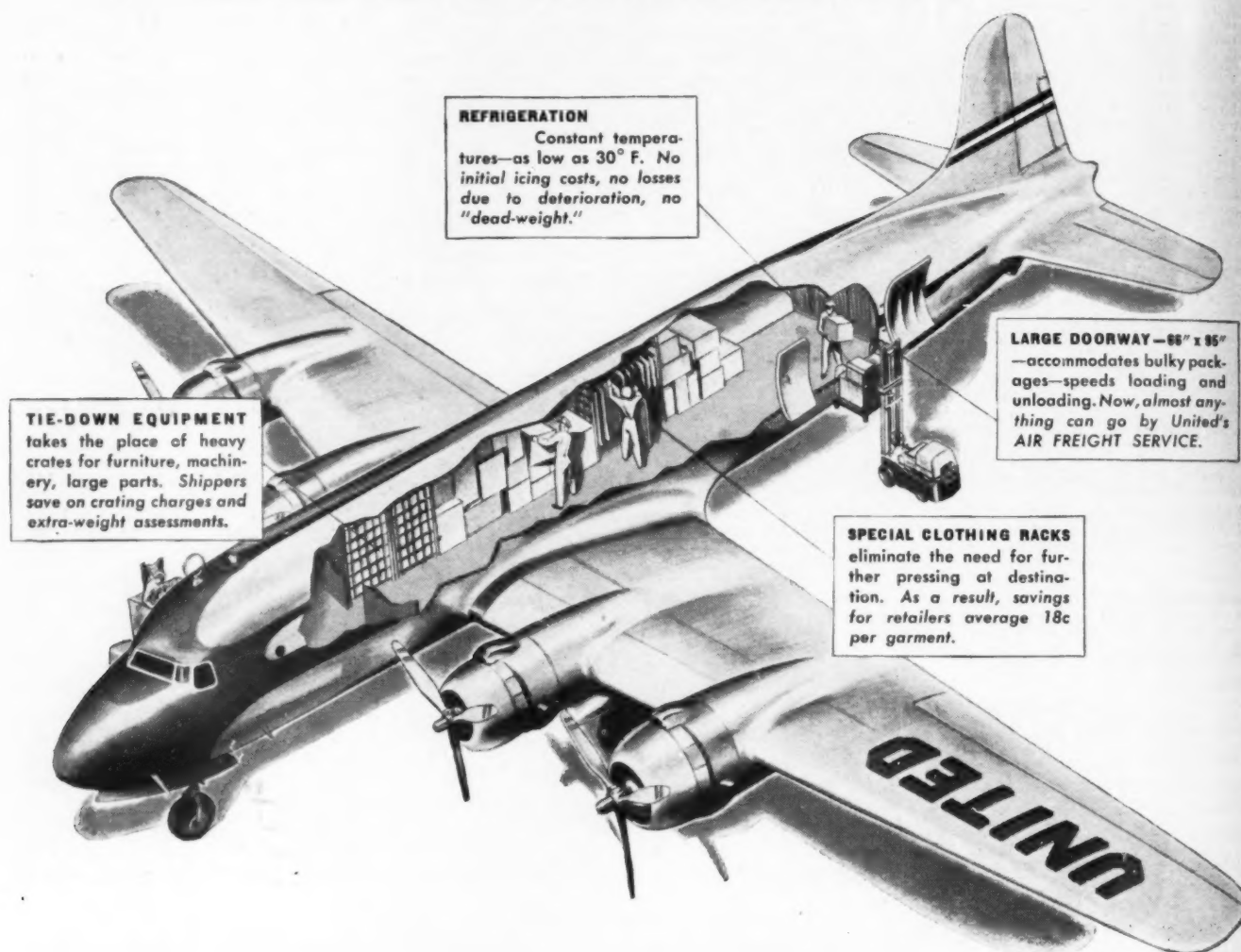
FUEL COST Gasoline consumption based on 115 h.p. cruising power and includes normal engine warm up, taxiing, and climb; oil consumption estimated as .075 gallon per hour of operation and includes 20% allowance for normal oil changes.	Gasoline—10 gal. @ \$.22/gal.	\$ 2.20	\$ 2.20	\$ 2.20	\$ 2.20	\$ 2.20
	Oil—.075 gal. @ \$1.20/gal. ....	.09	.09	.09	.09	.09
	TOTAL	\$ 2.29	\$ 2.29	\$ 2.29	\$ 2.29	\$ 2.29
DEPRECIATION COST Engine depreciation based on 4000 hours flying time. Total depreciation of hull is spread over a five-year period with a 30% residual value.	Engine Depreciation Per Hour	\$.50	\$.50	\$.50	\$.50	\$.50
	Hull Depreciation Per Hour	3.50	2.33	1.17	.78	.58
	TOTAL	\$ 4.00	\$ 2.83	\$ 1.67	\$ 1.28	\$ 1.08
MAINTENANCE Hangar cost based on \$300 rental cost per year. Repair parts and minor overhaul cost based on Beech records. Major overhaul based on 600 hours of operation.	Hangar Rental and Minor Check-up Per Hour.....	\$ 2.25	\$ 1.50	\$.75	\$.50	\$.37
	Repair Parts and Major Overhaul.....	1.50	1.50	1.50	1.50	1.50
	TOTAL	\$ 3.75	\$ 3.00	\$ 2.25	\$ 2.00	\$ 1.87
INSURANCE Equipment Insurance includes all risk and crash. Public Liability is on a \$25000/\$50000 basis; Property Damage is for \$50000. Passenger Liability is on \$10000 per seat for three seats. Includes Instruction Insurance.	Equipment Insurance	\$ 5.51	\$ 3.68	\$ 1.83	\$ 1.23	\$.92
	Public Liability .....	.12	.08	.04	.03	.02
	Property Damage .....	.14	.09	.05	.03	.02
	Passenger Insurance .....	.99	.66	.33	.22	.16
	TOTAL	\$ 6.76	\$ 4.51	\$ 2.25	\$ 1.51	\$ 1.12
TOTAL COST PER HOUR OF OPERATION		\$16.80	\$12.63	\$ 8.46	\$ 7.08	\$ 6.36
TOTAL COST PER PASSENGER HOUR	Passenger Hour Based on Three-Passenger Basis.....	\$ 5.60	\$ 4.21	\$ 2.82	\$ 2.36	\$ 2.12
TOTAL COST PER AIRPLANE MILE		\$ 0.112	\$ 0.084	\$ 0.056	\$ 0.047	\$ 0.042
TOTAL COST PER REVENUE PASSENGER MILE	Passenger Mile Based on *150 M.P.H. Av. Speed.....	\$ 0.037	\$ 0.028	\$ 0.019	\$ 0.016	\$ 0.014

(Employed Pilot Operated)

FUEL COST Gasoline consumption based on 115 h.p. cruising power and includes normal engine warm up, taxiing, and climb; oil consumption estimated as .075 gallon per hour of operation and includes 20% allowance for normal oil change.	Gasoline—10 gal. @ \$.22/gal.	\$ 2.20	\$ 2.20	\$ 2.20	\$ 2.20	\$ 2.20
	Oil—.075 gal. @ \$1.20/gal. ....	.09	.09	.09	.09	.09
	TOTAL	\$ 2.29	\$ 2.29	\$ 2.29	\$ 2.29	\$ 2.29
PILOT Pilot cost per hour based on salary of \$400 per month.	Pilot Cost Per Hour	\$24.00	\$16.00	\$ 8.00	\$ 5.33	\$ 4.00
DEPRECIATION COST Engine depreciation based on 4000 hours flying time. Total depreciation of hull is spread over a five-year period with a 30% residual value.	Engine Depreciation Per Hour	\$.50	\$.50	\$.50	\$.50	\$.50
	Hull Depreciation Per Hour	3.50	2.33	1.17	.78	.58
	TOTAL	\$ 4.00	\$ 2.83	\$ 1.67	\$ 1.28	\$ 1.08
MAINTENANCE Hangar cost based on \$300 rental cost per year. Repair parts and minor overhaul cost based on Beech records. Major overhaul based on 600 hours of operation.	Hangar Rental and Minor Check-up Per Hour.....	\$ 2.25	\$ 1.50	\$.75	\$.50	\$.37
	Repair Parts and Major Overhaul	1.50	1.50	1.50	1.50	1.50
	TOTAL	\$ 3.75	\$ 3.00	\$ 2.25	\$ 2.00	\$ 1.87
INSURANCE Equipment Insurance includes all risk and crash. Public Liability is on a \$25000/\$50000 basis; Property Damage is for \$50000. Passenger Liability is on \$10000 per seat for three seats.	Equipment Insurance	\$ 5.51	\$ 3.68	\$ 1.83	\$ 1.23	\$.92
	Public Liability .....	.12	.08	.04	.03	.02
	Property Damage .....	.14	.09	.05	.03	.02
	Passenger Insurance .....	.99	.66	.33	.22	.16
	TOTAL	\$ 6.76	\$ 4.51	\$ 2.25	\$ 1.51	\$ 1.12
TOTAL COST PER HOUR OF OPERATION		\$40.80	\$28.63	\$16.46	\$12.41	\$10.36
TOTAL COST PER PASSENGER HOUR	Passenger Hour Based on Three-Passenger Basis.....	\$13.60	\$ 9.54	\$ 5.49	\$ 4.14	\$ 3.45
TOTAL COST PER AIRPLANE MILE		\$ 0.272	\$ 0.190	\$ 0.110	\$ 0.083	\$ 0.049
TOTAL COST PER PASSENGER MILE	Passenger Mile Based on *150 M.P.H. Av. Speed.....	\$ 0.091	\$ 0.064	\$ 0.037	\$ 0.028	\$ 0.023

*150 M.P.H. average speed includes time of normal take off, taxiing and climb.

NOW ON UNITED'S MAIN LINE AIRWAY 4-ENGINE CARGOLINERS



They're in service NOW . . . operating on regular daily schedules . . . multiplying considerably the advantages of shipping via United's AIR FREIGHT SERVICE. Here's what the new 4-engine Cargoliner 230s mean to traffic managers in modern business:

Their *speed* — 230 miles an hour — assures "next morning delivery" for shipments consigned to any point along the Main Line Airway.

Their *size* — 9-ton capacity — more than triples the plane-load volume available to shippers.

Their *versatility* greatly broadens the range of commodities that can now go profitably by air.

And, as supplements to twin-engine Cargoliner

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But of even greater importance to traffic men: United's new volume freight rates — tailored to fit the tremendous load capacity of the Cargoliner 230s — bring long-haul shipping costs as low as 12¢ per ton-mile. Never have the advantages of shipping via United's fast, dependable and *economical* AIR FREIGHT SERVICE been so great.

• Write for free booklet telling how air freight fits into your business needs. United Air Lines, Air Cargo Division A-2, 231 South La Salle Street, Chicago 4, Illinois.

Pick-up and Delivery Service Provided in Most Major Cities

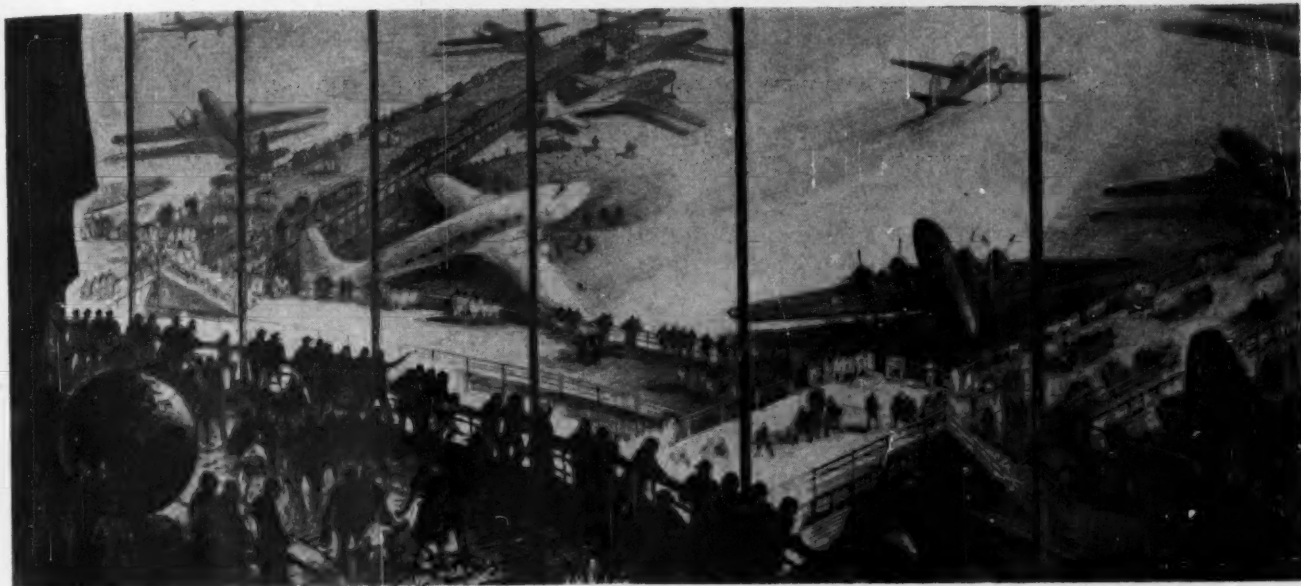
UNITED



AIR LINES

Building Airports

IS NO BOONDOGGING AFFAIR



By WILLIAM A. M. BURDEN
Assistant Secretary of Commerce for Air
United States Department of Commerce

THERE have been some who have criticized the National Airport Act as an unnecessary expenditure of public funds, and have even gone so far as to label it boondoggling. In answer to this I can only reiterate what I have said so many times before and have found to be incontrovertible.

Our system of landing facilities, if properly planned and constructed, will perform five primary functions of great importance to the future of the United States:

1. It will make possible the rapid and healthy growth of air transportation and private flying.
2. By helping to create these new industries it will strengthen our national economy.
3. It will contribute importantly to our national defense.
4. It will profoundly affect the life of our citizens for the better, possibly to an even greater extent than our highway system has done.
5. For the above four reasons and many others, it will provide the soundest possible kind of a public works program.

The importance of airports to air transportation is obvious.

There is no question that our airlines could not have reached their present state of development had not our airport system kept pace with their ex-

"The Federal Government can only provide the opportunity—the community must grasp it."

pansion. We have at present the best system of transport airports in the world but it must be modernized and expanded to meet the increasing requirements of a growing industry. It must have the benefit of the same process of constant improvement which our highway system is constantly undergoing as the mileage of hard surfaced roads is increased and two-lane highways are replaced by four-lane highways.

We all know that if additional towns are to receive air transportation new airports must be built, and most of us are aware that as the volume of traffic at present airline stops increases, many cities must provide additional runways either by enlarging their present airports or by building new ones.

If we are to have a successful civil aviation, we must have adequate airports and service facilities. It now generally is agreed that it is the responsibility of the Government to provide the airports, and of private enterprise to provide the servicing facilities. This

philosophy can be understood readily when phrased in familiar automotive terms.

No one would disagree with the fundamental axiom that it is the function of Government to build streets and highways and operate traffic lights, since these are for the universal benefit of the public. At the same time, we expect individual "entrepreneurs" to set up and operate the filling stations, garages, and other service agencies from which the public can make its own choice. It follows naturally that it is a legitimate expenditure of Government funds for governmental bodies to finance the construction of airports and air navigation aids, since these are the primary highways of the sky. Thus we now are enabled to create new sources of livelihood which obviously will inure to the benefit of each community where there is an airport.

The Federal Government can only provide the opportunity—the community must grasp it.

THE FEDERAL AIRPORT ACT:

Some Questions and Answers

THE following excellent list of questions and answers on the Federal Airport Act has been prepared by the Airport Division of the American Road Builders' Association:

Q. What amount of Federal aid has been authorized for airport development in the United States?

A. \$500,000,000; to be spent over a seven-year period.

Q. How are Federal aid funds apportioned to the States?

A. On a population-area basis.

Q. Would Federal aid funds in addition to my State's apportionment be available for airport development in my State?

A. There might be, from the Discretionary Fund.

Q. What would my State's apportionment be?

A. Approximately as shown in table. This is subject to slight modification due to greater apportionments made to States containing Indian lands.

Q. Has Congress appropriated funds for airport development under this authorization?

A. Yes.

Q. Have allocations of Federal aid funds been made to individual projects?

A. No.

Q. Is my city eligible to receive Federal aid for airport development?

A. No city will be eligible to be granted Federal aid until the new Federal Airport Plan is formulated.

Q. When is the formulation of the new National Airport Plan to be completed,

A. About October 15, 1946.

Q. If my city was included in the National Airport Plan of 1944, would it thereby be eligible for Federal aid for airport development?

A. Not necessarily. However, inclusion of your city in the 1944 Plan will be taken into account along with other factors and other locations in the formulation of the National Airport Plan called for in the Act. The 1944 Plan was preliminary in nature, and was not intended to be final and definite in determination of the aeronautical needs of all locations.

Q. Would the Federal Government bear the entire expense of airport development in my city?

A. No. If and when a grant agreement is made to extend Federal aid to your city, it would not exceed 50 percent of the allowable costs. It would not exceed 25 percent of cost of land requirements.

Q. Would the Federal Government share in cost of air rights over and near our airport?

A. Yes, to a certain extent, but only in cases where grant agreements are made.

Q. Might our city also expect State aid in its airport development?

A. Certain states, but not all, grant some aid under certain conditions. Before going forward with airport development, sponsors of projects should explore the possibility

of securing State aid. The information is readily available from State aviation authorities in States where such authorities are provided.

Q. Would my city receive credit for expenses it might incur for land acquisition and planning for airport development even though no grant agreement had been made for Federal assistance?

A. Within limits, yes, if the expenses were incurred subsequent to May 13, 1946, and if and when a grant agreement is finally made.

Q. Would it be advantageous for our city to act jointly with our State in seeking Federal aid for airport development?

A. In the opinion of many, yes. Some States require that procedure.

Q. When will my city be scheduled to receive Federal aid for its airport development?

A. That will depend on the aeronautical needs of your city in relation to such needs at other locations.

Q. How many acres would be required for an airport at our city?

A. That would depend on a number of factors which could best be determined by an engineering study concerning prevailing winds, altitude, approach zones and probable air traffic at your city. Before acquiring land for airport development such a study should be made by competent airport engineers. Some State aviation authorities are staffed to give this information.

Q. Could my city file an application for Federal aid for airport development, joining in with my country or neighboring city, or my State?

A. Yes. Such a procedure might be highly desirable. Your State aviation authorities would gladly discuss such a possibility.

Q. My city will have a Class 4 airport. Will it be possible for 1947 Federal aid funds to apply to it?

A. The Federal Airport Act was approved May 13, 1946—too late to enable the Administrator of CAA to comply with the Act's requirement that a list of Class 4 and larger airports where airport development is proposed, shall be submitted to Congress for its approval 60 days before the end of each fiscal year, which closes June 30. That being the case, Federal aid funds for the 1947 fiscal year may not be spent on large airports. This condition, however, will probably be corrected by legislation which is now pending, permitting the Administrator to grant Federal assistance to such projects during the current fiscal year, doing so without Congressional approval.

Q. Does the Federal Airport Act permit Federal aid funds to be used for airport maintenance?

A. No. The Act requires that sponsors must assure the CAA Administrator that airports developed with the use of Federal aid funds will be maintained and suitably operated.

Q. Could a private individual or our Rotary Club sponsor an application for

Federal aid for airport development at our city?

A. No. Sponsors must be a public agency, or two or more public agencies.

Q. Is the amount shown in 1944 National Airport Plan concerning estimated cost of airport development at my city regarded as a reliable estimate of present cost?

A. Estimates given in the 1944 National Airport Plan were preliminary in nature, and did not include all items involved in airport development. Therefore, a more careful study of current local conditions would be necessary to provide a current and complete estimate. Competent airport engineers could probably develop this information for you, doing so quite quickly.

Q. (a) What, if any, steps should my city or county officials take to have my community included in the National Airport Plan now being formulated? (b) Who will formulate the plan?

A. (a) Sponsors of airport development projects might wish to communicate with their State aviation authorities who maintain close contacts with CAA officials. (b) Final decisions in these matters will be the responsibility of CAA.

Q. Would there be any advantage in sponsors taking up matter of airport development with CAA officials in Washington?

A. In general, such matters would be handled by CAA's district or division offices. Therefore, it would be best to handle these matters through your State aviation officials or CAA's regional office which handles such matters in your State.

Q. Could an airport at my city be made self-sustaining?

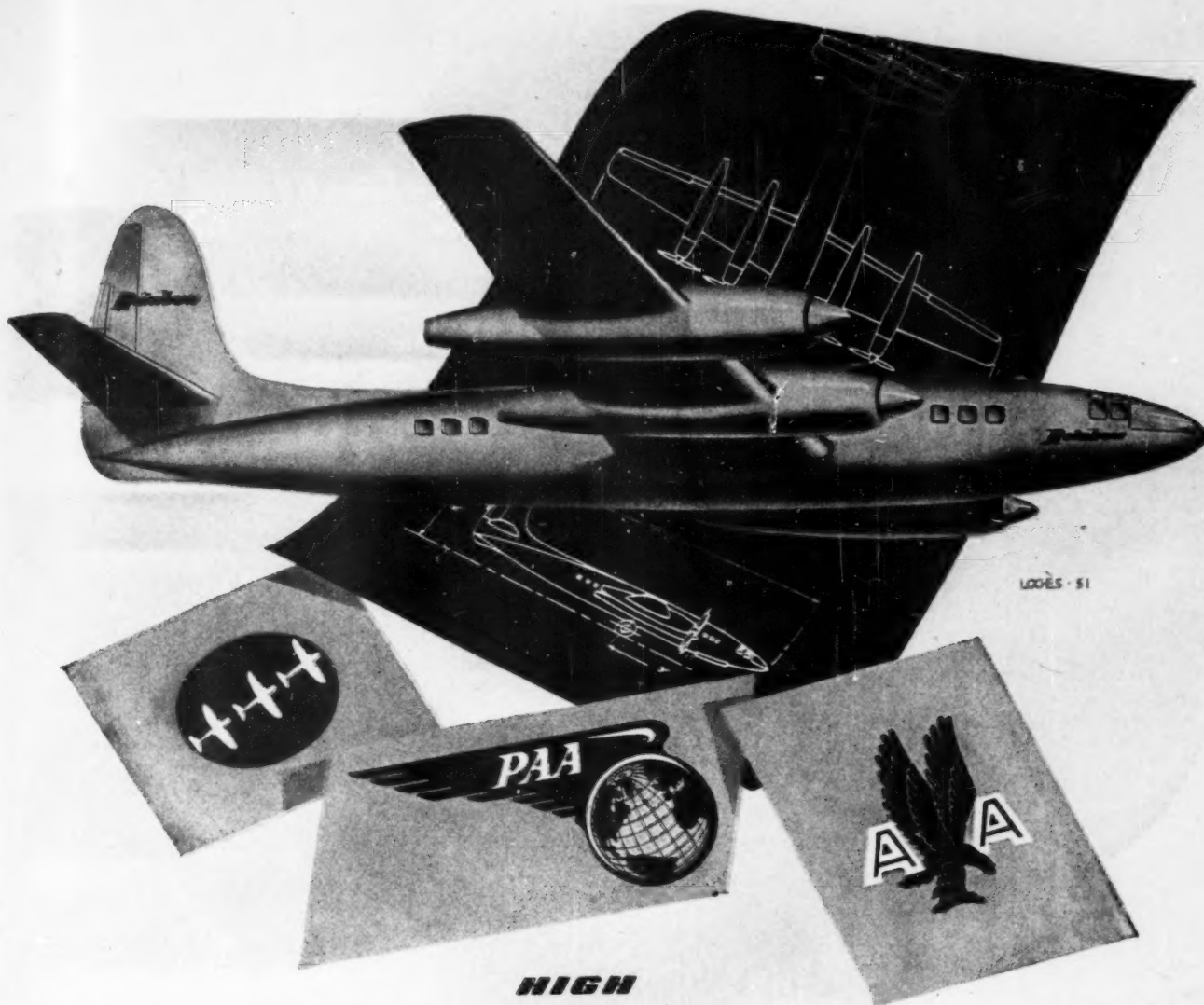
A. A dogmatic "yes" or "no" type of answer is impossible. However, with efficient and aggressive management it could in time be made self-sustaining. Aside from a direct profit-or-loss standpoint, indirect benefits from an airport as a public utility should be kept in mind. Principal non-flying sources of income are sale of aviation gasoline and oil, hangar and office rental, storage of planes, operation contracts and concessions.

Q. Would it be necessary for my city to employ an airport manager?

A. A city might operate an airport directly by employing a manager, or it might act indirectly through a fixed base operator under an operator-manager contract.

Full Information

Because of the direct relationship of airports to air transportation, this magazine has kept rigidly to a policy of reporting full developments on this all-important phase of aviation. By turning the next page, a complete table of the State apportionments of Federal funds appropriated for the fiscal year 1947 will be found.



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FEDERAL-AID AIRPORT PROGRAM

STATE APPORTIONMENTS OF FEDERAL FUNDS

APPROPRIATED FOR FISCAL YEAR 1947

STATE	STATE RATIO TO TOTAL UNITED STATES POPULATION (1940 Census)			STATE RATIO TO TOTAL UNITED STATES LAND AND WATER AREA			STATE PERCENTAGE AND APPORTION- MENT OF AUTHORIZED FUNDS		
	Population	Ratio %	Apportionment	Area	Ratio %	Apportionment	Ratio %	Apportionment	Rank
U. S. Totals.....	131,559,275	100.000000	\$15,411,375	3,096,751	100.000000	\$15,411,375	100.000000	\$30,822,750	
Alabama.....	2,832,961	2.151573	331,587	52,169	1.684637	259,626	1.918105	591,213	20
Arizona.....	499,261	0.379178	58,437	113,900	3.678339	566,883	2.028758	625,320	16
Arkansas.....	1,949,387	1.480518	228,168	53,102	1.714765	264,269	1.597642	492,437	35
California.....	6,907,387	5.246013	808,483	158,762	5.126728	790,099	5.186370	1,598,582	3
Colorado.....	1,123,296	0.853119	131,477	104,247	3.366335	518,799	2.109727	650,276	15
Connecticut.....	1,709,242	1.298133	200,060	5,582	0.180253	27,779	0.739193	227,839	44
Delaware.....	266,505	0.202405	31,193	2,407	0.077727	11,979	0.140066	45,172	49
Dist. of Columbia.....	663,091	0.503604	77,612	69	0.002228	343	0.252916	77,955	48
Florida.....	1,897,414	1.441045	222,085	60,295	1.947041	300,066	1.694043	522,151	32
Georgia.....	3,123,723	2.372401	365,620	58,924	1.902768	293,243	2.137585	658,863	14
Idaho.....	524,873	0.398630	61,434	83,557	2.698215	415,832	1.548422	477,266	37
Illinois.....	7,897,241	5.997786	924,341	57,926	1.870541	288,276	3.934163	1,212,617	5
Indiana.....	3,427,796	2.603338	401,210	36,519	1.179268	181,741	1.891303	582,951	21
Iowa.....	2,538,268	1.927760	297,094	56,280	1.817389	280,085	1.872574	577,179	22
Kansas.....	1,801,028	1.367842	210,803	82,276	2.656849	409,457	2.012346	620,260	18
Kentucky.....	2,845,627	2.161193	333,070	40,395	1.304432	201,031	1.732813	534,101	28
Louisiana.....	2,363,880	1.795316	276,683	49,539	1.599709	246,537	1.697513	523,220	31
Maine.....	847,226	0.643450	99,164	34,317	1.108161	170,783	0.875805	269,947	43
Maryland.....	1,821,244	1.383196	213,170	12,303	0.397287	61,227	0.890241	274,397	42
Massachusetts.....	4,316,721	3.278457	505,255	9,216	0.297602	45,865	1.788030	551,120	26
Michigan.....	5,256,106	3.991900	615,207	96,791	3.125566	481,693	3.558733	1,096,900	6
Minnesota.....	2,792,300	2.120692	326,828	86,280	2.786146	429,383	2.453419	756,211	10
Mississippi.....	2,183,796	1.658546	255,605	48,272	1.558795	240,232	1.608671	495,837	34
Missouri.....	3,784,664	2.874372	442,980	69,674	2.249906	346,741	2.562139	789,721	9
Montana.....	559,456	0.424895	65,482	147,138	4.751367	732,251	2.588131	797,733	8
Nebraska.....	1,315,834	0.999348	154,013	77,237	2.494130	384,380	1.746739	538,393	27
Nevada.....	110,247	0.083730	12,904	110,540	3.569548	550,115	1.826639	563,019	23
New Hampshire.....	491,524	0.373302	57,531	9,304	0.300444	46,303	0.336873	103,834	45
New Jersey.....	4,160,165	3.159556	486,931	8,220	0.265439	40,908	1.712497	527,839	29
New Mexico.....	531,818	0.403904	62,247	121,666	3.928827	605,488	2.166365	667,735	13
New York.....	13,479,142	10.237120	1,577,681	53,952	1.742213	268,499	5.989666	1,946,180	2
North Carolina.....	3,571,623	2.712571	418,044	52,712	1.702171	262,328	2.207371	680,372	12
North Dakota.....	641,935	0.487536	75,136	70,665	2.281908	351,673	1.384722	426,809	39
Ohio.....	6,907,612	5.246184	808,509	44,679	1.442770	222,351	3.344477	1,030,860	7
Oklahoma.....	2,336,434	1.774472	273,471	69,919	2.257818	347,961	2.016145	621,432	17
Oregon.....	1,089,684	0.827502	127,543	97,029	3.133252	482,877	1.980422	610,420	19
Pennsylvania.....	9,900,180	7.518975	1,158,779	46,068	1.487624	229,263	4.503299	1,388,042	4
Rhode Island.....	713,346	0.541771	83,494	1,228	0.039654	6,111	0.290713	89,605	47
South Carolina.....	1,899,804	1.442861	222,365	31,193	1.007281	155,236	1.225071	377,601	40
South Dakota.....	642,961	0.488315	75,256	77,047	2.487995	383,434	1.488155	458,690	38
Tennessee.....	2,915,841	2.214519	341,288	42,246	1.364204	210,243	1.789361	551,531	25
Texas.....	6,414,824	4.871922	750,830	267,346	8.633113	1,330,481	6.752518	2,081,311	1
Utah.....	550,310	0.417949	64,412	84,916	2.742100	422,595	1.580025	487,007	36
Vermont.....	359,231	0.272828	42,047	9,609	0.310293	47,820	0.291560	89,867	46
Virginia.....	2,677,773	2.033711	313,423	42,326	1.366787	210,641	1.700249	524,064	30
Washington.....	1,736,191	1.318600	203,214	70,589	2.279453	351,295	1.799027	554,509	24
West Virginia.....	1,901,974	1.444509	222,619	24,181	0.780851	120,340	1.112680	342,959	41
Wisconsin.....	3,137,587	2.382930	367,242	66,216	2.138241	329,532	2.260586	696,774	11
Wyoming.....	250,742	0.190433	29,348	97,914	3.161830	487,281	1.676132	516,629	33

Federal Aid Airport Program Appropriation—Fiscal year 1947.....	\$45,000,000
For projects in Alaska, Hawaii and Puerto Rico.....	1,740,000
Net total for projects in the United States.....	\$43,260,000
Administrative Expenses, 5%.....	\$ 2,163,000
Discretionary Fund, 25% of balance.....	10,274,250*
	12,437,250
For apportionment for projects in the States according to Population Ratio.....	\$15,411,375
For apportionment for projects in the States according to Land and Water Area Ratio.....	15,411,375
	\$30,822,750

* Available for distribution as determined by the Administrator, C. A. A.

AIR--X--PRESS

Air express this month begins its 20th year of service to the American shipping public. Established on September 1, 1927, over four pioneer airlines reaching only 26 cities, this air shipping service now operates over 21 regularly-scheduled domestic airlines with direct service to more than 375 airport cities in the U. S. and Canada. International air express, entering its 13th year, extends the service to most foreign countries, with additional points being added almost daily.

FROM CRADLE DAYS

Today's modern four-engined passenger planes, speeding shipments over 61,000 route miles daily, are in striking contrast to the single-engined, open cockpit bi-planes that carried "mail and express only" in 1927. The intrepid pilots who flew those fragile ships—without benefit of weather reports or other safeguards—had to be personally "on the beam" every minute if they hoped to put their cargoes down safely at the widely-separated, ill-equipped airports of aviation's cradle days.

From its beginning 19 years ago, the service has been handled for the regularly-scheduled domestic airlines by the Air Express Division of Railway Express Agency. Through its 23,000 offices all over the U. S., the agency expedites shipments moving by air or air-rail express between the 375 airport cities and the "off-airline" points. Its 16,000 motor trucks pick-up and deliver the shipments, and the agency's personnel dispatches traffic on the first available plane to destination.

THE FIRST MILLION!

Because of the American shippers' need for a nation-wide, coordinated air shipping service, combining speed of air transport with a flexible ground pickup and delivery service, air express volume increased steadily each year after 1927, excepting for three depression years. The traffic hit its first million-shipment mark in 1940, topped that figure during the war years, and rang the two-million shipment bell last year.

The first full year of operation (1928) saw only 17,000 shipments handled; total weight, 60,000 pounds. In record-breaking 1945, the total was 2,146,650 shipments weighing 40,126,755 pounds. Today air express is averaging 225,000 shipments monthly, about 30 per cent ahead of 1945, and is speeding scarce consumer goods from manufacturers to dealers' shelves as American business and industry compete for peacetime markets.

HIGHLIGHTS

Other milestones as air express begins its 20th year of progress include:

August 1, 1934—International air express service started.

February, 1936—Eight additional domestic airlines join the pioneer organization to form a unified, nation-wide air shipping system.

June, 1942—Air priority system established to insure the uninterrupted movement of vital war material.

July, 1943—Air express rates reduced 12½ percent.

January, 1946—Rates reduced 13 percent.

HIGHER SPEEDS LOWER RATES!



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RATES CUT 22% SINCE 1943 (U. S. A.)					
AIR MILES	2 lbs.	5 lbs.	25 lbs.	40 lbs.	Over 40 lbs. Cents per lb.
149	\$1.00	\$1.00	\$1.00	\$1.23	3.07c
349	1.02	1.18	2.30	3.68	9.21c
549	1.07	1.42	3.84	6.14	15.35c
1049	1.17	1.98	7.68	12.28	30.70c
2349	1.45	3.53	17.65	28.24	70.61c
Over 2350	1.47	3.68	18.42	29.47	73.68c

INTERNATIONAL RATES ALSO REDUCED

AIR EXPRESS

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GOODRICH *Shows the Way*

"IT takes quick thinking to keep up with the pace of business nowadays," remarked a member of the B. F. Goodrich organization in Akron, Ohio, recently. He illustrated his point with the following story:

"Yesterday, around noon, one of our executives told me that he and some others were going to Louisville, Kentucky, and asked if there were anything they could do or find out for me while there. I couldn't think of anything then, but later in the day a question came up in connection with one of the synthetic rubber plants our company has been operating for the Government down there. That evening I happened to run across this man again at a hotel, and in the course of conversation I said to him:

"By the way, there's something now that you can find out for me when you go to Louisville."

"Hell, we've already been there," he replied.

"They had made the round trip in one of the company's private planes and transacted their business in Louisville practically in an afternoon's working time."

It took quick work during the war for executives of the company to keep on top of the war production emergencies of a great organization operating some 15 different plants in points as far apart as Cadillac, Michigan, and Texarkana, or Watertown, Massachusetts, and Los Angeles, California, and be on call for urgent war conferences in Washington and elsewhere. There wasn't always time to go by train, even if reservations were available, or to wait for priorities on war-crowded commercial airlines. It was for these reasons that Goodrich, in May, 1945, purchased and placed in service a twin-engine Lockheed *Lodestar*, which had been used as a private transport plane by an Army general.

In 12 months in Goodrich service this plane flew more than 112,000 miles, over 24 states, and over Cuba, Mexico, and Canada. It averaged 52 hours of flying per month, and has transported 822 passengers.

That the end of the war did not put a stop to the usefulness of this industrial adventure in privately operated air transportation is apparent from the fact that the company now has added a second plane—a high speed Beechcraft cabin plane, which was purchased and



BUSINESS FLIGHT—Factory officials boarding a Goodrich transport plane (top) which will take them to one of the company's outlying plants . . . In service—The Beechcraft plane (below) used by company men on their regular business rounds. A Lockheed *Lodestar* is also in the service of Goodrich.

placed in service early in March.

With the purchase of the *Lodestar* the B. F. Goodrich Company became the first firm in the rubber industry to own a plane for the purpose of connecting its various branch plants and district offices. The company also was the first in the industry—1929—to buy a plane for the purpose of testing tires, wheels, etc. The company's two present planes are not used for testing nor for any experimental purpose but only to provide transportation for top executives or others whom they may designate, and strictly for business reasons.

The *Lodestar* has a top speed of 265 miles an hour, cruises at 200, and lands at 80. Fully loaded, it weighs 10 tons, and can carry fuel for a 10-hour flight. It carries enough fuel for a trip to England, and such a trip is, in fact, tentatively planned. It can go nonstop from Akron to Miami, and from New York to Miami, which it makes in five hours and 23 minutes.

Powered by two Wright Cyclone 1250 horsepower engines, the *Lodestar* has an automatic pilot and an automatic direction finder. As an airline transport, this plane carried a crew of three

and 14 passengers, but in the rubber company's service it is limited to 10 passengers and two pilots. As it is used mostly in daytime flights, there are no beds, but the plane carries one nine-foot couch and all chairs are of the reclining variety, equipped with ottomans.

The new Beechcraft also is a twin-engine job, P&W Juniors of 450 horsepower furnishing the power. One of Beechcraft's newest planes, built since the war and with many innovations developed during the war, it has a cruising speed of 175 miles per hour.

Most frequent user of the planes is the company's president, John L. Collyer. In addition to the demands upon his personal attention that would naturally arise in an organization with branch plants and district offices in all parts of the country, Collyer has been one of the foremost advisers to the Government in connection with the wartime rubber emergency. Last year he participated in two International Rubber Study Conferences at the request of the State Department, and served the Government for several weeks as special director of rubber programs for the War Production Board. With rubber the most critical supply problem of the war, many urgent visits to Washington on short notice were necessary.

For such purposes the company plane, which could make the trip from the rubber capital to the nation's capital in an hour and 11 minutes, proved well-nigh indispensable. It enabled Collyer on more than one occasion to fly from Akron to Washington for a morning conference, on to New York City for luncheon and a busy afternoon, and back home to Akron in the evening.

Seats for Vets

Vice presidents T. G. Graham, J. J. Newman, and George W. Vaught are also extensive users of the company airplanes and make the planes available to other executives when urgent business indicates their need. During the war and the subsequent "homecoming" period, empty seats were always given to servicemen.

Mr. Vaught has expressed the opinion that the first plane paid for itself within two months in time saved and mental strain avoided. Obviously it is a great advantage for executives to arrive at important conferences involving huge amounts of money with fresh minds and without travel fatigue.

There is no doubt of the importance of the planes from a time-saving standpoint. The trip from the company's main plant in Akron to one of its new-

est plants in Miami, Oklahoma, for example, takes 27 hours by rail, but can be made by company plane in three hours and 19 minutes. On a trip from Akron to the Canadian branch plant in Kitchener, Ontario, it took an hour and five minutes to fly from Akron to Toronto, and an hour and 50 minutes to go to Kitchener by automobile, the landing field at Kitchener having been considered too small for landing. The plane almost invariably beats the telegrams sent to Akron to keep the home office informed of its whereabouts.

It is iron-clad policy that safety comes first in the operation of the planes. Performance and the keeping of appointments must be sacrificed when safety considerations dictate.

From the time a flight is requested until it is completed, all decisions as to time of flight or whether or not to undertake the flight are in the hands of the pilots. Each plane has a pilot and copilot and both accompany the plane on each trip. Manning the *Lodestar* are Chief Pilot Tom Kennedy and Hume Earnest; and of the Beechcraft plane, Fred K. Dick and Carl Schultz—all men with extensive flying experience. They are required to fly at least two hours on instruments each month and to take medical examinations every six months.



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UNITED AIR LINES has announced that it has placed an order with the Boeing Aircraft Company for seven *Strato-cruisers* at a cost of \$11,000,000. The four-engined, double-decked planes will be delivered to the airline beginning in the fall of next year.

Capital Airlines-PCA has applied to the Civil Aeronautics Board for an extension of its existing routes for the purpose of operating regularly scheduled shipments of mail and cargo across the continent.

American Airlines de Mexico will spend some \$400,000 to improve the airport at Monterrey and to equip it suitably for the operation of four-engine aircraft.

Three hundred sidewalk bicycles were recently flown from Los Angeles to St. Louis by **Mercury Airfreight**. St. Louis Christmas shoppers, please note.

Comparisons between foreign and domestic air systems were drawn in a recent address by Fowler Barker, editor and former secretary of the Air Transport Association, before members of the **Airlines Traffic Club of New York**.

Development of airplane-to-land telephone using airborne radio has been disclosed by the radio division of **Bendix Aviation Corporation**. An installation has been made in a Lockheed *Lodestar* owned by the Hercules Powder Company, Wilmington, Delaware.

An **Air Cargo Transport C-47**, piloted by H. Roy Penzell, president, was the first plane to leave the **Mansfield (Ohio) Municipal Airport** after the close of dedication ceremonies. It carried a complete **Westinghouse** combination kitchen and laundry for use in a forthcoming motion picture.

Pan American World Airways' certificate has been amended by the CAB to include Dublin as an intermediate stop on the New York-London route, and Frankfurt as an intermediate stop on the United States-Brussels-Prague route. Application to serve Paris as well as Spanish cities other than Barcelona has been denied.

The **XS-1**, first pilot-carrying plane designed to travel faster than sound, has been constructed by **Bell Aircraft** for the **National Advisory Committee for Aeronautics** as a research tool to probe the realm of supersonic flight.

Air mail service has been inaugurated by the **Canadian Postal Administration** on a new route between Toronto, Ontario, and Cleveland, Ohio, via London, Ontario.

Under the terms of a directive issued by the **War Assets Administration**, 38 Douglas *Skymasters* will be made available to airlines for use in overseas service.

Trans World Airline has expanded its agency agreement with the **American Express Company** to include representation in 35 foreign cities. TWA will now be represented by the express company's offices in Europe, Middle East, India, Central and South America, British Isles, and the Orient.

The **New York State Aviation Council** will hold its annual meeting in Buffalo on October 4-5. Chairman of the Program and Arrangements Committee is **John W. Van Allen**, with **James Graham**, **C. A. (Casey) Jones**, **Ralph Barton**, and **Charles O'Connor** as assistants.

Reynolds Pen Company reports that 50,000 of its ball-point pens recently were air expressed from Chicago to India. It was flown by TWA to Cairo and then transhipped to Karachi.

According to **Francisco Pignatari**, president of **Companhia Aeronautica Paulista** of Brazil, American-made instruments and materials will go into the making of the new three-seater, *Dream Plane*. The company is the largest lightplane producer in South America.

Pan American World Airways will pay commissions to travel agents amounting to approximately \$500,000 in 1946, according to V. E. Chenea, vice president and general traffic manager. Chenea estimated that total sales of tickets throughout district offices would be \$25,000,000 for the year.

At the seventeenth annual conference of the **American Association of Airport Executives**, Woodruff De Silva of Los Angeles, California, was elected president; Neil Brackstone of Lansing, Michigan, first vice president; Hervey Law of Washington, D. C., second vice president; Douglas Langstaff of New Orleans, Louisiana, third vice president; and Pat Moore of Peoria, Illinois, executive secretary. The new directors elected were: Chas. E. Hanst, Dallas, Texas; Matt Ryan of Marshall, Minnesota; Al Near of Louisville, Kentucky; John Randolph of St. Louis, Missouri; and F. L. Bayley of Fargo, North Dakota.

Air Cargo Transport Corporation has contracted to fly 250,000 crates of avocados from Cuba to the United States. About six plane loads a day leave Havana for Miami, and the shipments are expected to continue for some time.

The **Airquipment Company**, manufacturers of ground handling equipment and special tools for aircraft, has moved to new and larger quarters at 2820 Ontario Street, Burbank, California.

SMOOTH AS SILK



Wearing its new trade mark, insignia, and color scheme, this **Chicago and Southern Air Lines DC-4** transport points up the last word in passenger comfort. The 50-passenger plane boasts the highest speed for this type of plane (it cruises at 265 miles per hour), and offers such extra conveniences as a public address system and a moving information panel designed to give interesting travel data to passengers. The **C & S Skymaster** is the first commercial aircraft equipped with **Eclipse-Pioneer** all-electronic automatic pilot. The airline will inaugurate service on the first of its authorized Latin American routes this fall. Flights will operate between Chicago and Havana, with St. Louis, Memphis, and New Orleans as intermediate points. Service will also be offered between Houston and the Cuban capital city. Awaiting approval by the respective governments involved are two additional routes: Havana to Caracas, via Kingston, Aruba, and Curacao; and Havana to San Juan, via Camaguey, Port-au-Prince, and Ciudad Trujillo.

Republic Aviation Corporation has reached an agreement with the War Assets Administration to lease for five years, with option to buy, the Government-owned aircraft plant facilities and airport at Farmingdale, Long Island.

Construction has begun on an aerial country club, to be located 15 minutes from downtown Portland, Oregon. The club, to be operated by **Skylife, Inc.**, will provide hangar facilities for 500 airplanes, hotel accommodations for visiting airmen and their guests, and access to its tennis courts, swimming pool, and baseball diamond.

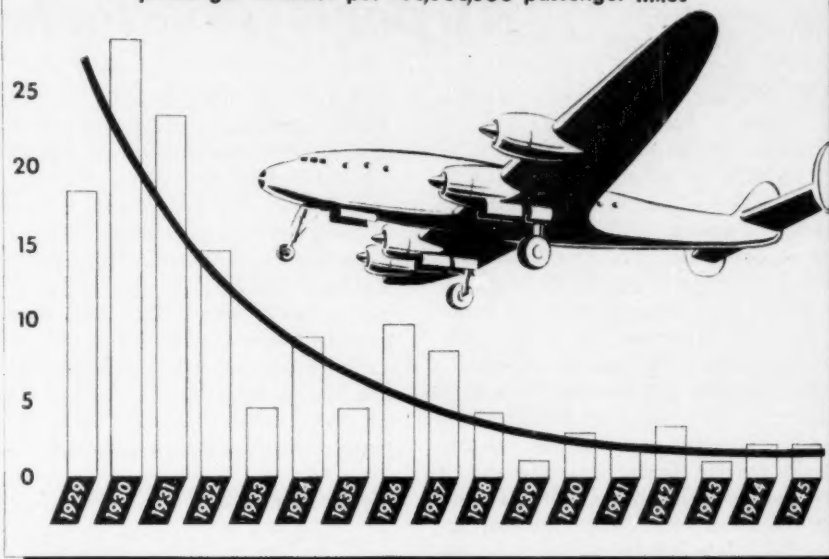
Twelve Martin 303 planes, six Douglas DC-6s and five additional Douglas DC-4 craft have been bought by **Braniff International Airways** at a total cost, including maintenance equipment, of \$10,000,000.

Delta Air Lines has signed contracts for a \$1,000,000 expansion which will more than double its present general offices and maintenance facilities at the Atlanta Municipal Airport. DAL's present building was constructed in 1940-41, when the company moved its general offices from Monroe, Louisiana, at which time personnel totaled 350. Today more than 2,400 are on the payroll.

The **Gloster Meteor**, British jet plane, has cracked the world's speed record again—unofficially. **Group Captain E. M. Donaldson**, pilot of the plane, said his ship attained a top speed of 619 miles an hour. The official mark is 606 miles an hour.

TREND OF AIR TRANSPORT SAFETY

passenger fatalities per 100,000,000 passenger miles



A protest against the CAB's proposed exclusion of Hawaii from the areas which may be served by non-scheduled air carriers from the mainland has been lodged by the **Matson Navigation Company**. Matson is conducting a non-scheduled, common carrier air service between the United States and Hawaii.

Trans Caribbean Air Cargo Lines has signed an agreement with **Cruzeiro do Sul**, Brazilian airline, whereby the two carriers will feed each other international traffic for further transportation in their respective territories. There also will be mutual acceptance of international airway bills for greater facility in freight service.



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19 Melinda Street—Toronto, Ont.
S.A.V.I.—Rio de Janeiro, Brazil

NEW YORK'S

Airports Headache

IF adequate facilities are to be provided to handle New York City's share of the expected increase of air traffic in the metropolitan area, Idlewild Airport will have to be completed by the Summer of 1950—four years ahead of schedule. This finding was contained in the highly publicized Madigan-Hyland report on the future air traffic in the New York area, which was made public by Mayor William D. O'Dwyer.

The report stated that immediate construction of separate smaller fields for itinerant and non-scheduled planes would relieve the extreme pressure if the quarter-billion-dollar Idlewild project would be put off until the original schedule date (July 1, 1954).^{*} Although the availability of Floyd Bennett Field had not been taken into account in the report, Mayor O'Dwyer had forecast the reopening of the Navy field to commercial operations. Meanwhile, the Port of New York Authority has appointed four expert consultants to its staff on its survey of Idlewild, LaGuardia, and Floyd Bennett Airports: Hervey F. Law, Albert E. Blomquist, Thomas P. Smith, and J. Earl Steinhauer.

Begun in February, the Madigan-Hyland survey will be issued in three separate reports. Two more are awaited, the second dealing with the physical aspects of airport facilities; and the third with revenues, expenses, and general financing.

Mayor O'Dwyer is reported as con-

vinced of the fact that even the combined facilities of Idlewild and LaGuardia will not be sufficient to handle the anticipated air traffic. It was for this reason that he sought President Truman's aid in persuading the Navy Departments to make the Floyd Bennett facilities available to the city. The mayor has reasoned that some method must be found now to finance the construction, reconstruction, rehabilitation, and operation of all city airports without impairing municipal borrowing power within the constitutional limit.

Effect Scouted

Some feel that the survey by the Port Authority will have an effect on the findings to be contained in the two forthcoming Madigan-Hyland reports, but neither the mayor nor his associates have made any comment on this score.

The report just aired by O'Dwyer estimates that for the 1946-55 period, air traffic at Idlewild and LaGuardia will climb steadily. In 1955, the total arrivals and departures at the two fields

^{*}A special issue of AIR TRANSPORTATION devoted to Idlewild Airport was published in December, 1945, giving the most complete and authentic information on New York City's giant airport published anywhere to date. Among the numerous articles were ones written by the then Mayor Fiorello H. LaGuardia; Comptroller Joseph D. McGoldrick; James C. Buckley, chief, Bureau of Planning and Statistics, Port of New York Authority; M. F. Redfern, secretary, Air Transport Association; and Emery F. Johnson, secretary of the Air Cargo Section of the latter organization.

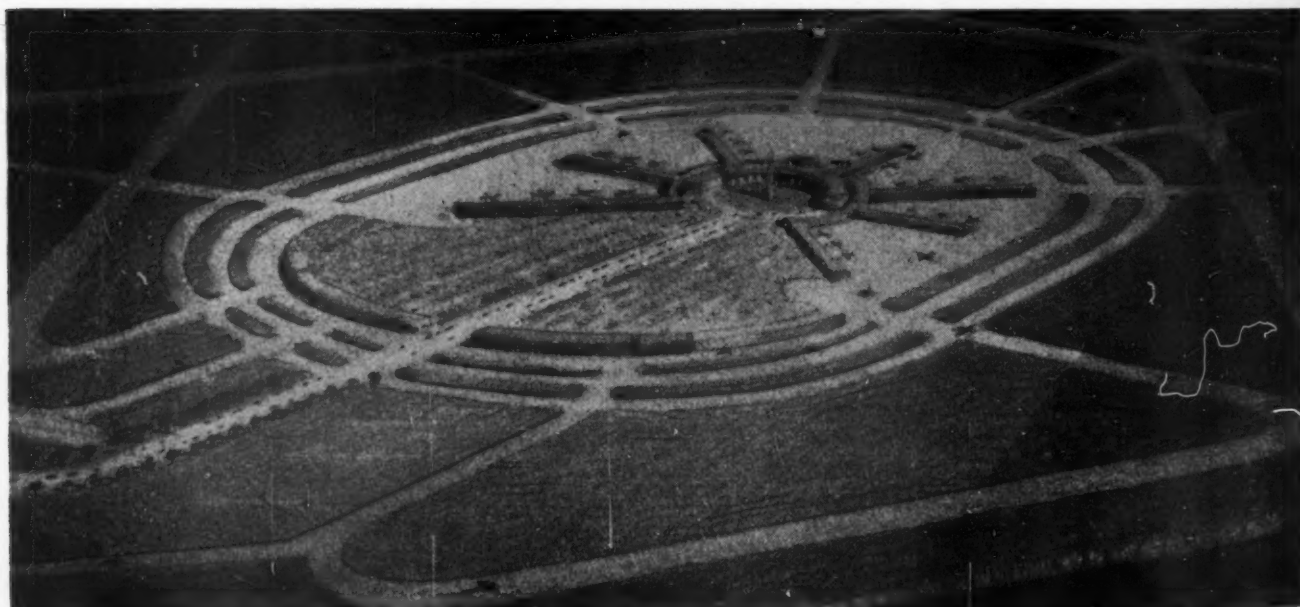
would be 974,500, with passengers reaching the high level of 15,643,200. Writing in AIR TRANSPORTATION last December, former Comptroller Joseph D. McGoldrick estimated the total number of arrivals and departures at Idlewild alone during the 1955-56 period at 600,310, rising to 698,164 in the 1960-61 period. In 1955-56, he expected 17,289,000 passengers to use Idlewild's facilities, and 22,621,000 in 1960-61.

Madigan-Hyland went into every phase of air traffic, including its present status and future growth in relation to surface land travel. Also included in the report was an account of operations at LaGuardia, Newark, and other airports in the metropolitan area. The figures were based upon a study of country-wide surveys with a proportionate allocation to the New York area. The extensive table accompanying this article provides graphic estimates of air travel and air cargo.

One striking portion of the report noted that there was a complete absence of figures on the number of passengers arriving and departing at LaGuardia Airport. It stated:

"This is the basic element to be considered in airport planning, but more than six years of operation have been allowed to elapse without any record being kept."

The estimates contained in the Madigan-Hyland report are concededly on the conservative side. It stated that its figures on future air cargo transport might be greatly exceeded, in which case the problem of adequate ground facilities and the construction of separate air freight terminals would come to the fore.



IDLEWILD—The Hugh Ferriss drawing of the giant airport showing general view from an elevation of 3,000 feet. Original architects were Delano and Aldrich.

DOMESTIC AND INTERNATIONAL PASSENGERS, EXPRESS, FREIGHT AND MAIL PLANE MOVEMENTS IN NEW YORK AREA—ARRIVING AND DEPARTING

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
(A) Domestic Passengers										
Estimated National Revenue Passengers...	12,800,000	16,850,000	21,100,000	24,950,000	32,050,000	35,400,000	40,000,000	43,000,000	47,350,000	55,850,000
Estimated % of Nat. Originating, N. Y. ...	14%	15%	16%	16%	16%	16%	16%	16%	16%	16%
Estimated Rev. Pass. Originating, N. Y. ...	1,800,000	2,525,000	3,350,000	4,000,000	5,125,000	5,650,000	6,400,000	6,875,000	7,575,000	8,925,000
Est. Rev. Pass. Originating and Terminating, New York ...	3,600,000	5,050,000	6,700,000	8,000,000	10,250,000	11,300,000	12,800,000	13,750,000	15,150,000	17,850,000
Through Passengers at New York (5% of Above) ...	200,000	250,000	350,000	400,000	500,000	550,000	650,000	650,000	750,000	900,000
Total New York, Arriving and Departing Passengers ...	3,800,000	5,300,000	7,050,000	8,400,000	10,750,000	11,850,000	13,450,000	14,400,000	15,900,000	18,750,000
Average Seats Per Plane ...	25.5	31	37	38	39	40	41	42	42	43
Load Factor ...	85%	75%	65%	65%	65%	65%	65%	65%	65%	65%
Total Domestic Passenger Planes Arriving and Departing New York Area ...	175,320	227,960	293,140	340,080	424,060	455,770	504,690	527,470	582,420	670,840
(B) International Passengers										
Overseas (Transatlantic, Bermuda, Caribbean, E. and W. Coast of S. A.)										
Est. National Departing Rev. Pass. ...	119,570	142,340	170,230	213,070	273,160	321,440	367,360	423,650	474,930	530,950
Est. Revenue Passengers Departing N. Y. ...	61,800	78,500	99,600	127,100	166,500	196,500	224,250	260,700	292,700	326,900
Est. Rev. Pass. Arriving and Departing, New York ...	123,600	157,000	199,200	254,200	333,000	393,000	448,500	521,400	584,400	653,800
Average Seats Per Plane ...	44	45	47	49	51	53	54	55	56	57
Load Factor ...	75%	70%	65%	65%	65%	65%	65%	65%	65%	65%
N. Y. Area Arriving and Departing Planes ...	3,740	4,980	6,520	7,980	10,040	11,400	12,780	14,580	16,080	17,640
Canada										
Est. Rev. Passengers Departing, N. Y. ...	75,000	104,200	119,200	165,700	212,200	234,000	265,500	284,200	313,500	369,700
Est. Rev. Pass. Arriving and Departing, New York ...	150,000	208,400	238,400	331,400	424,400	468,000	531,000	568,400	627,000	739,400
Average Seats Per Plane ...	25.5	31	37	38	39	40	41	42	42	43
Load Factor ...	85%	75%	65%	65%	65%	65%	65%	65%	65%	65%
N. Y. Area Arriving and Departing Planes ...	6,920	8,960	9,910	13,410	16,740	18,000	19,920	20,820	22,960	26,450
Total International Passenger Planes Arriving and Departing New York Area ...	10,660	13,940	16,430	21,390	26,780	29,400	32,700	35,400	39,040	44,090
(C) Total Domestic and International Passengers Arriving and Departing New York Area ...										
	4,073,600	5,665,400	7,487,600	8,985,600	11,507,400	12,711,000	14,429,500	15,489,800	17,112,400	20,143,200
(D) Total Domestic and International Passenger Planes Arriving and Departing N.Y. Area										
	185,980	241,900	309,570	361,470	450,840	485,170	537,390	562,870	621,460	714,980
(E) Express, Freight and Mail										
Domestic Express and Freight										
Est. Nat. Express and Freight (Tons) ...	236,300	279,200	339,200	407,000	526,300	677,000	850,500	1,045,900	1,262,600	1,500,000
Estimated % of National Departing New York Area ...	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Estimated Tonnage Departing N.Y. Area ...	23,630	27,920	33,920	40,700	52,630	67,700	85,050	104,590	126,260	150,000
Estimated Tons Arriving and Departing New York Area ...	47,260	55,840	67,840	81,400	105,260	135,400	170,100	209,180	252,520	300,000
Per Cent of Express and Freight Arriving and Departing New York Area:										
By Passenger Planes ...	50%	50%	50%	45%	40%	37%	34%	31%	28%	25%
By All-Cargo Planes ...	50%	50%	50%	55%	60%	63%	66%	69%	72%	75%
Tons of Express and Freight Arriving and Departing New York Area:										
By Passenger Planes ...	23,630	27,920	33,920	36,630	42,100	50,100	57,830	64,840	70,700	75,000
By All-Cargo Planes ...	23,630	27,920	33,920	44,770	63,160	85,300	112,270	144,340	181,820	225,000
Average Pay Load per All-Cargo Plane (Tons) ...	3.2	3.9	4.6	5.3	6.0	6.4	6.8	7.3	7.7	8.1
Average Load Factor per All-Cargo Plane ...	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
Total All-Cargo Planes Arriving and Departing New York Area ...	9,230	8,950	9,220	10,560	13,160	16,660	20,640	24,720	29,520	34,720
Domestic Mail										
Estimated National Mail Arriving and Departing (Tons) ...	32,350	42,580	48,010	53,620	59,380	81,100	92,540	104,300	116,230	127,500
Estimated % of National Arriving and Departing New York Area ...	30.2%	29.3%	28.5%	27.7%	26.9%	26.0%	25.1%	24.2%	23.2%	22.2%
Tons of Mail Arriving and Departing New York Area by Passenger Planes ...	9,770	12,476	13,682	14,852	15,974	21,086	22,302	25,240	26,966	28,300
Overseas Express and Freight										
Estimated Tons Express and Freight Arriving and Departing New York ...	3,668	4,424	5,482	7,084	10,030	13,740	19,564	28,400	43,060	53,300
Estimated All-Cargo Planes Arriving and Departing New York ...	120	180	240	360	480	720	960	1,200	1,450	1,700
Overseas Mail										
Tons of Mail Arriving and Departing New York Area by Passenger Planes ...	1,400	1,520	1,660	1,890	2,136	2,590	3,060	3,560	4,070	4,160
Total Cargo Domestic and Overseas										
Tons of Express, Freight and Mail Arriving and Departing New York Area ...	62,098	74,360	88,664	105,226	137,220	172,816	214,926	266,400	326,442	385,760
Total All-Cargo Planes										
Domestic and Overseas Arriving and Departing New York Area ...	9,350	9,130	9,460	10,920	13,640	17,380	21,600	25,920	30,970	36,420
(F) Total Domestic, International and Overseas Passenger and All-Cargo Planes Arriving and Departing New York Area ...										
	195,330	251,030	319,030	372,390	464,480	502,550	558,990	588,790	652,430	751,350

New Routes

NEW routes to Alaska, the Orient, and Australia have been established as the result of President Truman's approval of the Civa Aeronautics Board's decision in the Pacific Case.

In its decision the CAB authorized two routes to the Orient: one via the great circle route across the North Pacific into Tokyo, Seoul, Shanghai, and Manila; the other across the Central Pacific via Honolulu, Midway, Tokyo, Shanghai, and Hong Kong.

The Northern route will be operated via the Seattle gateway as well as via the Chicago-Minneapolis gateway which also includes New York as a co-terminal point. San Francisco and Los Angeles have been designated as co-terminal points on the Central route. This had the effect of also establishing two new routes to Alaska—one from Seattle and one from the Chicago gateway—as well as intralaskan service from Juneau to Anchorage.

Northwest Airlines was authorized to operate over the great circle route via the North Pacific from both the Chicago and Seattle gateways. Authorization was given to NWA to operate from the co-terminal points New York and Chicago via Edmonton, Canada, to Anchorage, Alaska, and from the terminal point Seattle to Anchorage, and thence beyond Anchorage to Tokyo, Shanghai, and points in Manchuria and Eastern China to Manila.

Pan American Airways was authorized

to extend its Central Pacific route from Midway Island to Tokyo, Shanghai, and Hong Kong and from Manila to Saigon, Singapore, and Batavia, and was granted the right to operate from Honolulu to Wake Island direct. PAA's present certificate on its Central Pacific route was further amended extending it from Hong Kong via Saigon, French Indo-China, Bangkok, Thailand, and Rangoon, Burma, to Calcutta, where connections will be made with Pan American's North Atlantic route. The airline was also authorized to extend its South Pacific route from Noumea, New Caledonia, to Sydney, Australia. Further permission was granted consolidating the existing PAA United States-Alaska routes into one route, designating Seattle and Fairbanks as terminal points and Ketchikan, Juneau, Whitehorse, Burwash Landing and Tanacross as intermediate points.

By authorizing NWA to operate between the United States and the Orient, the Board also created new routes between Seattle and Anchorage and between New York and Chicago and Anchorage. In establishing these routes to Alaska from the United States the CAB recognized the traffic needs of Alaska and indicated that if the combined services of PAA's existing United States-Alaska route and NWA's newly authorized routes "do not meet the demands of the territory, the Board is not powerless to remedy the situation. Under sections 404 and 1002 of the Act we are in a position to compel adequacy of service. Further, since no international complications are involved, an additional carrier can be authorized at any time and the

Board can and will act promptly if the existing service proves inadequate." Intralaskan service was also extended by amending the certificate of Pacific Northern Airlines, enabling that carrier to operate from Anchorage to Juneau via Cordova and Yakutat.

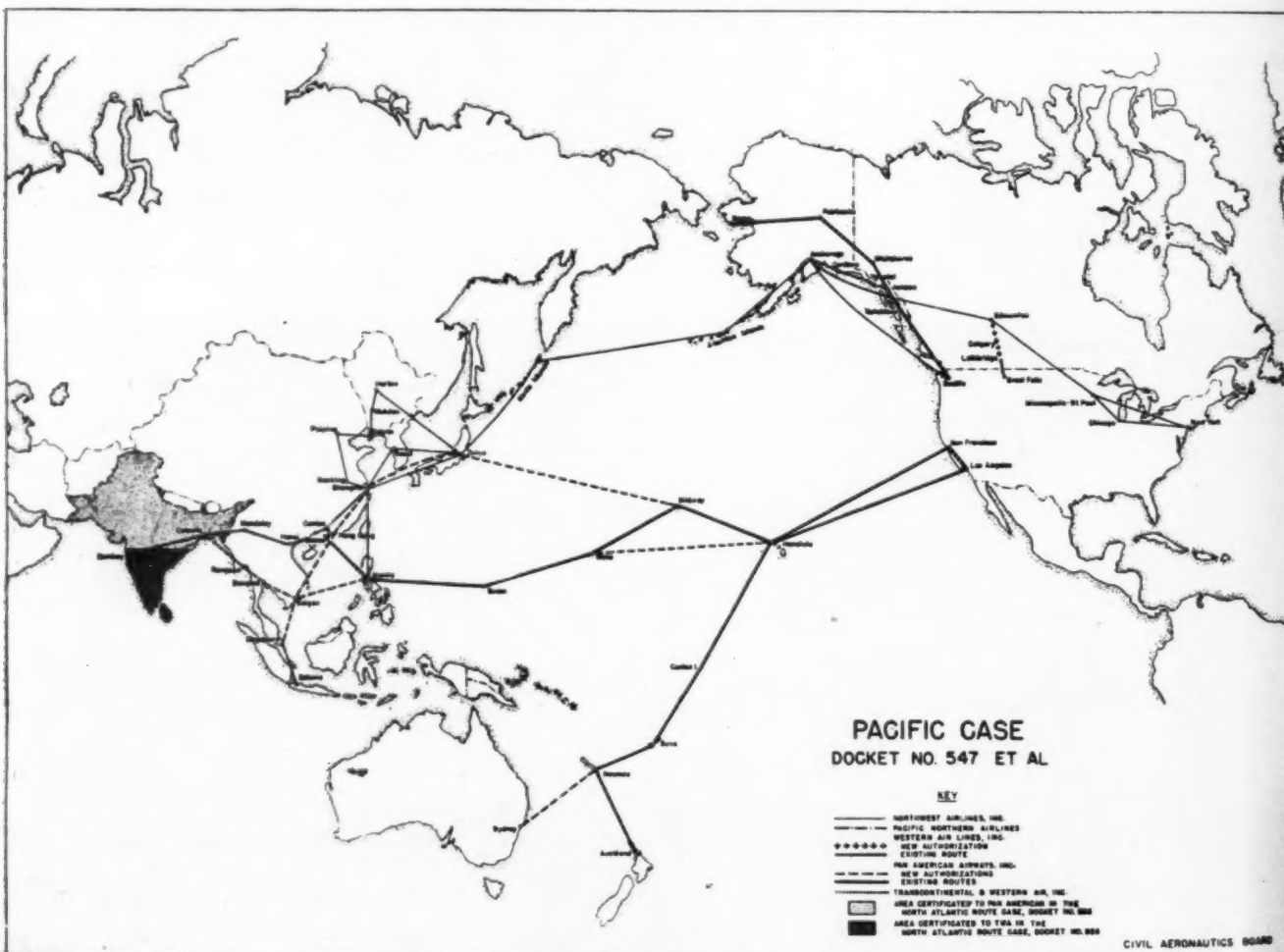
In addition to the new round-the-world route of Pan American, the Board permitted TWA to extend its North Atlantic route from Bombay, India, via Calcutta, Mandalay, Burma, Hanoi, French Indo-China, and Canton, China, to Shanghai, where connections will be made with the newly authorized Pacific routes, thus establishing in effect a second United States flag round-the-world service.

Western Air Lines was authorized by the Board to extend its Route No. 52 from Lethbridge, Canada, to Edmonton via Calgary, Canada, thus making possible connections with NWA's great circle route to the Orient.

Universal Airways Buys 7 Boeing 314 Seaplanes

Seven surplus Boeing 314 flying boats have been purchased from the War Assets Administration by Universal Airways. The sale price was revealed as \$352,000.

The planes were put up for sale by WAA on a competitive bid basis, and Universal's offer was the highest received. Acceptance of this bid has been approved by the Department of State. Spare engines and parts go with the planes, which had been used in overseas service by the Navy during the war.



IT'S AN *Air* WORLD

[REG. U. S. PAT. OFF.]

By L. A. GOLDSMITH, *Economic Analyst*, AIR TRANSPORTATION

A UNIQUE series of meetings took place at International House in New York City, during the week from August 21-28 inclusive. These meetings were officially designated as a World Congress on Air Age Education, sponsored by Air Age Education Research, in cooperation with a number of educational institutions; universities; departments of public instruction; agricultural and mechanical colleges; public, private, and parochial schools.

The effect of these meetings should have far-reaching results in developing an understanding of the impact of the Air Age and air transportation on the peoples of the world, and especially on today's growing-up generation.

Three hundred and five delegates, representing 97 educational institutions came from 50 countries, including our own. The delegates, speakers, and audience represented many fields of aviation and education. From aviation were airplane manufacturers, airline of-

ficials, air cargo specialists, military experts, aviation economists, and air attaches from foreign countries. The educational delegates were just as varied and interesting, representing not only professional educators, but many other differentiations, widely divergent and distinctly practical rather than academic. Professors of social studies mingled with economists and international relations experts, as well as with specialists on geography and physiology.

Among the educators were a number of Catholic nuns. One of these, Sister Lawrence Marie, supervisor of the Archdiocese of New York, had already altered her syllabus on the teaching of history and geography to conform more closely to Air Age requirements. She had come to the Congress to orient herself on the possibility of further changes in the curricula which might be necessary for adaptation to the evolutionary forces of today's air developments; checking up on the changes she had already made and might wish to make.

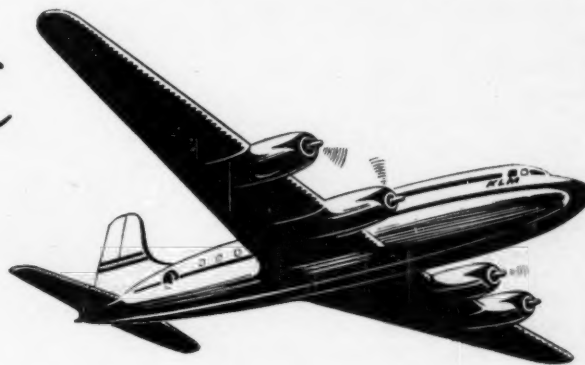
Progressive thought was evident everywhere, and closed minds seemed to be conspicuous by their absence. From the Western States were many delegates and Oklahoma was especially well represented. One of the Oklahoma educators, Agnes M. Drewry of Sapulpa, is the director of elementary education and instructional materials for her city. Her eager interest in all phases of the Congress, augurs well for the future air-mindedness of the youthful pupils who will have the benefit of her Air Age educational planning.

Also from Oklahoma the Congress welcomed a vigorous young Flying Farmer, Gene McGill, past president (at the age of 31) of the National Flying Farmers Association. He has been flying since the age of 25 and owns four personal planes which he uses to advantage in modern agricultural developments on his 6,000-acre farm. His planes include two Aeroncas, one Piper Cruiser, and a Cessna.

In this Cessna, McGill, accompanied by his attractive young wife, Vada, who is also a flyer and his co-pilot, flew to the Congress in a leisurely hop of 11 hours and 40 minutes, at a transportation cost of about \$12. They have two young daughters aged three and four, who have been flying with their parents since each was six weeks old.

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Royal Dutch Airlines

WEST INDIES DIVISION

It is impossible in this short space to cover all the varied personalities, places and projects which were virtually catapulted into a listening group, avidly intent on glimpsing the potentialities of the rapidly changing aspects of life in this air world. The kaleidoscopic speed of the ideas presented at each stimulating thought-provoking session were almost too much for the mortal mind to grasp all at once. But the ideas will sink in later, and some of these will stick. That is the real objective of the Congress, and this goal was concisely phrased by Dr. N. L. Engelhardt, director of Air Education Research, when he opened the meetings with this statement:

"Air is the only natural resource common to all men! Therefore its use and our attitudes about it are of common concern to people everywhere. That is the reason for having a World Congress on Air Education."

Another underlying thought which ran through all the sessions, almost as a muted theme song, is well described by the following comments which originated from an English woman, Professor Eva Taylor, formerly of the University of London. She was not present at International House, but her thoughts were quoted by Dr. F. C. Bishop, adviser on geography to the British Ministry of Education:

"The revolution in accessibility can transform humanity into 2,000 million enemies, or alternatively into 2,000 million neighbors."

One of those "2,000 million neighbors," Group Captain William Garing, of Australia, was the delegate who had traveled the greatest distance. China was ably represented by two exceptional speakers, Dr. Chih Meng, director of the China Institute in America; and B. A. Liu, director of the Chinese Ministry of Information in Canada. Great Britain had two aviation specialists: Sir William P. Hildred, director general of IATA, and Peter Masefield, civil air attache at the British Embassy in Washington.

The United States had a roster of top-flight leaders who spoke before the Congress, among whom were Gill Robb Wilson, Wayne Parrish, C. R. Smith, W. T. Piper, Joseph Geuting, and J. A. Wooten.

Wilson delivered a notable keynote address, holding the listeners spellbound. His sincerity, knowledge, and feeling on the importance of the change aviation has brought to the people of

the world, is imposing. When he tells you that "man is the target for tomorrow," that "civilization is struggling for its life," and that the "fate of such civilization will rest with you,"

somehow one is given a sense of personal responsibility. When he points out that "if the 25 key men who saw the impact of the air forces had been taken out of world politics, the world today would have been under complete Hitler control," you realize how close was our escape.

In his address, Parrish started out somewhat mildly with the statement that "in the field of commercial air transport we have seen a growth within the past few years that is nothing short of staggering." But then came the fireworks:

"The range and speed of new air planes to be available starting next year will bring the world to our doorsteps, provided other nations who do not want us to fly freely about the world do not put too many obstacles in front of us. The British, particularly, are not anxious to give us the freedom of schedules that commercial operations and a free people require. Although our country came to a very suitable and fair agreement with the British at Bermuda this Spring, there is reason to believe that the British are blocking our efforts in other parts of the world by attempting to impose severe restrictions in the number of flights we can make."

"It is noteworthy," Parrish continued, "that Britain, which has been the champion of freedom of the seas, has not been reconciled to a similar policy in

the air, and it might be, just by chance, that it is because the United States has ample transport equipment and the know-how to do the job."

In view of Parrish's remarks about Great Britain, it was extremely interesting to listen to Peter Masefield, air attache at the British Embassy. He gave an excellent talk, straight and to the point, and he did not mince words about the effect that national prestige and security had in holding back the advancement of world aviation. He emphasized the fact that while "air is international, aviation has made its advent into a world which is primarily national," making the "ultimate in air transportation a little difficult as things are in the world today."

Masefield classified air transportation as *trade-by-air* (business aviation), *travel-by-air* (get-together aviation), and *national air* (prestige and security aviation). That last aspect is, of course, the fly in the ointment, which both Parrish and Masefield perceive. It was the latter who stressed that "not until the third aspect is settled will the first two come into their own."

Sir William Hildred, though director general of IATA, thinks of himself as an internationalist. He also referred in no uncertain terms to the restrictions surrounding the airplane and the development of air transportation. He was

EVEN WOODEN INDIANS FLY



This pretty PCA-Capital Airlines hostess registers extreme surprise as Chief Bill, one of the vanishing cigar store wooden Indians (remember?) raises one hand and mutely says "How!" Chief Bill, seven feet tall and tipping the scales at 290 pounds, was shipped via Air Express from New York to Cleveland by the Cigar Store Institute. Later the Indian was flown back to New York and returned to Bill's Gay Nineties, a local nightclub restaurant, from which it had been borrowed.

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vehement in his denunciation of the man-made impediments and obstructions to air travel: such as customs, immigration, and public health laws and regulations. "The international rattle-snake—the visa—is the worst of all time-and-soul-destroying obstruction to international travel," he said.

In Gael Sullivan's speech, a major point was the importance of reducing international air mail postage rates. At the forthcoming Rio de Janeiro Conference of the International Postal Union, Sullivan plans to bring up this subject with the hope of securing uniform rates of 10 cents for all of South America, 15 cents to Europe, 20 cents to Africa, and 30 cents for the Middle and Far East.

Dr. Ben Charrington, director of the Social Science Foundation of the University of Denver, gave an illuminating address on the impact of aviation in regard to international relations. It will be recalled that a few years ago, Dr. Cherrington was for a short time director of cultural relations in the United States Department of State.

Kenneth E. Newland, head of the Aviation Department at Stephens College spoke on the schoolhouse of the air. Mrs. Pearl Wanamaker, president of the National Education Association, and superintendent of public instruction in the State of Washington addressed the first morning's session of the conference and contributed this striking note of warning: "We are the

last earthbound generation . . . and our children are being taught by earthbound teachers . . . the implications are not at all scientific."

Gordon H. Atwater, director of the Hayden Planetarium in New York, brought a new angle into the discussions with his topic, *World Time as The Layman Must Know It*. Helmuth Ray, chief cartographer of the Rand McNally company, presented his views on the changes in trading areas due to the developments of air transportation.

Looking at the conference from an overall perspective, there was no doubt but that all roads led straight through to the importance of air transportation. Indeed, it could be said that air transportation was the star performer at International House, with air age education as the glamorous "leading lady" heading a brilliant cast of educators and other specialists to round out the dramatic spectacle of today's aviation.

The delegates, speakers, and spectators at the World Congress on Air Age Education were symbolic of our present earthbound generation, standing on the threshold of the Air Age, almost breathless at the vistas unrolled before them, summed up as "only the opening verse of the opening page of endless possibilities." More than one speaker voiced those stimulating words of Rudyard Kipling as a significant preview of the potentialities which lie before us in the immediate present of the Air Age, and not only those in the far distant future.

Air Transportation In Model of Stratocruiser

There's a 10-foot model of the Boeing Stratocruiser making the rounds of the country these days, and resting on the pint-sized magazine rack in the interior of the plane is a miniature of the July issue of AIR TRANSPORTATION. It is one of three miniature miniature magazines on the rack, the only aviation periodical in the group.

The Stratocruiser model is complete in every detail, even as to interior, finish, and furnishings. It is being placed on display in all key spots, including airline terminals, chambers of commerce, and department stores. Among the places where the plane has been shown were the Wings Club in New York and the National Airport in Washington, D. C. At the time of the showing in New York, it was announced coincidentally by United Air Lines that a fleet of seven had been purchased from Boeing at a price of \$11,000,000.

7 Airlines for Willow Run

Seven airlines — United, Northwest, TWA, Pan American, Chicago and Southern, Western and PCA — have agreed to use Willow Run Airport for operations in the city of Detroit. It has been pointed out that the airlines do not consider this airport as a permanent one for Detroit.

ACA Steps up Activity After Reorganization

Air Clearance Association, Inc., which has moved to 11 Broadway, New York, has completed a complete operational reorganization at LaGuardia Field.

The association's activities have been stepped up to the extent that all shipments referred to it for customs clearance are now being cleared or delivered within 48 hours after receipt of shippers' documents. Messengers are making four trips daily to the airport. An organization of custom brokers "established to accommodate and protect brokers," ACA is headed by Charles F. McElroy. Charles Riotte holds the post of vice president; Martin Kerner, secretary; Daniel F. Young, treasurer; and Joseph Gamburg, general manager.

New Institute Formed

The Foreign Transportation Institute has been formed by The American University, Washington, D. C., offering specialized transportation courses in cooperation with the Office of Business Economics, Department of Commerce; Division of Economics and Statistics, United States Maritime Commission; Association of American Railroads; National Federation of American Shipping; and the Air Transport Association.



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[REG. U. S. PAT. OFF.]

AMERICAN

Operations of American Airlines for the first six months of 1946 resulted in net loss of \$121,748.17. For the first four months of the year operations were unprofitable, loss being \$443,105.06. Operations for the months of May and June were conducted at profit of \$321,356.89.

For the first six months of 1945, net profit, after provisions for Federal taxes, amounted to \$2,868,140.39. Passenger revenue for the first six months of this year showed an increase of 45.1 percent over the comparable period of last year. Passenger revenues for 1946 were \$24,869,931.04, compared with \$17,138,600.77 for 1945. Freight revenue also showed an increase, the revenue for the January-June period of 1946 being \$641,264.29, compared with \$404,008.49 for 1945. Revenue from the transportation of mail was down approximately half. Mail revenue for the first six months of 1946 was \$1,609,626.35, compared with \$3,235,272.83 for 1945. Decrease in soldier mail, following return of troops from overseas stations accounted for the principal reduction in mail poundage.

The company excluded from its profit and loss for the first six months of 1946 the estimated net cost amounting to \$837,038.05, after tax adjustment applicable thereto, which resulted from delays in re-locating personnel from military contract to commercial operations, and from retraining personnel returning to the company from military service. The above amount was charged to the reserve for transition to peacetime operations.

AMERICAN OVERSEAS

American Overseas Airlines has announced it is offering 1,049,895 additional shares of its capital stock for subscription to its stockholders at \$12 per share. Negotiable warrants good until September 18, 1946, were distributed to stockholders of record on August 21, 1946, on the basis of 1½ new shares for each share now held. American Airlines, Inc., agreed to purchase the 540,000 shares to which it is entitled to subscribe as a stockholder. American Export Lines, Inc., which is entitled to subscribe to 252,000 shares, distributed its rights to its own stockholders of record on August 21 on the basis of one new share of American Overseas for each five shares of stock of American Export held on August 21.

BOEING

Boeing Airplane Company and its domestic subsidiary, Boeing Aircraft Company, showed a consolidated net loss of \$1,071,403.06 for the six months ended June 30, 1946. In addition, the company in the six-month period has charged \$2,275,000 against reserves set up by the directors during the war period to cover reconversion costs and the cost of developing new products and markets. It was pointed out that if the company shows a loss at the end of the year, a substantial

portion of such loss and of the amount charged against reserves will be recoverable through the application of the loss carry back provisions of the Revenue Act.

BRANIFF

In a special meeting of the Board of Directors of Braniff Airways, a dividend of 15 cents per share on the airline's one million outstanding shares of stock was declared. The dividend was payable on August 22 to stockholders of record at the close of business August 12.

COLONIAL

Colonial Airlines passenger travel continued to establish new records for the fourth consecutive month when 16,814 passengers flew 4,820,773 revenue-miles in July. Passengers carried for the first seven months of 1946 increased 84.5 percent over the same period a year ago.

Mail and express flown also showed substantial increase for July over the same month in 1945. A total of 15,228,476 mail pound-miles and 8,773,303 express pound-miles were flown in July, 1946, increases of 47.5 per cent and 36.5 percent, respectively, over July, 1945.

CONTINENTAL

Continental Air Lines carried 22,905 passengers in June, 1946, compared to 12,528 passengers in June, 1945, a percentage increase of 82.83 on Routes 29, 43 and 60. There was a 91.19 per cent increase in the number of passengers the first six months of 1946 over the previous January through June total of 1945. The revenue passenger-miles in June, 1946, on the new Tulsa-El Paso route were up 23 percent over the month of March, 1946, when that route was inaugurated.

LUSCOMBE

Sales by Luscombe Airplane Corporation for the first six months of 1946 totaled \$2,309,329. The company sold 1,004 planes during this period, and is now manufacturing 14 all-metal lightplanes per day with a force totaling about 1,200 persons.

In the second quarter of this year the company put a profit-sharing plan into effect under which the employees are receiving \$35,809 for the period April 1 through June 30. During the second quarter, the company experienced a gain of \$114,785 before providing \$35,809 as the employees' share of the profits. However, the resulting net profit of \$78,976 for the second quarter was not quite sufficient to make up the loss of \$148,182 incurred in the first three months, and therefore the company completed the full six months with a loss of \$69,212.

MARTIN

The Glenn L. Martin Company has a backlog of business amounting to approximately \$175,000,000, Glenn L. Martin,

president, told stockholders in a letter transmitting the company's annual report for the calendar year 1945 and a report for the first six months of 1946. The backlog, one of the largest so far reported among aircraft manufacturers, includes both military and commercial orders.

According to the report, the company and its subsidiaries had net sales of \$18,467,137 and net profit of \$901,878 (after all charges, including taxes) for the six months' period ending June 30, 1946.

Financial statement of the company and its subsidiaries for 1945 showed net sales of \$356,162,188, compared with \$500,445,422 in 1944; net income after all charges and reserves, but before special adjustments, of \$8,379,373 in 1945, as compared with \$4,909,572 in 1944; and net income per share of \$7.39 in 1945, as compared with \$4.37 in 1944. The company's net earnings for 1945, after all charges and reserves but before special adjustments, amounted to 2.35 percent on the total net sales of \$356,162,188. Earnings for 1945 are subject to renegotiation. Semi-annual dividend payments of \$1.50 per share during 1945 totaled \$3,388,167. Early in 1946 a quarterly dividend policy was decided upon by the company's board of directors. The first two quarterly dividends of 75 cents per share have been paid this year.

On December 31, 1945, the company's total current assets were \$121,557,060; and current liabilities were \$80,381,647. Federal and state income taxes for 1945 amounted to \$30,573,637.

NORTHEAST

Northeast Airlines' passenger totals for the months of June and July—88,354—exceeded those of the corresponding period in 1945 by 151 percent. Revenues for the two-month period also established a new NEA mark, reaching \$974,072—a 109 percent increase over the 1945 two-month total of \$468,635.

NORTHWEST

Northwest Airlines planes carried more revenue passengers in the first six months of this year than in any previous half-year period in its 20-year history. The total reached 261,228 for the January-June period, exceeding the mark for the last six months of 1945 by about 62,000. Revenue passenger-miles totaled 159,589,157, about 27,000,000 more than in the previous half-year.

A midsummer rush of vacation travelers to all parts of the country brought an increase in passenger traffic during July when a total of 56,298 revenue passengers were carried by the airlines. This was an increase of 24,044 over the same month of last year. Revenue passenger-miles totaled 35,500,114, as compared to 21,276,256 in July, 1945.

During July, 308,918 pounds of express were carried aboard NWA planes. This compared with 291,566 in June this year, and with 283,717 pounds in July, 1945. The express shipments during this July were carried 182,795,020 pound-miles, compared with 167,360,126 pound-miles in June of this year and 187,408,141 pound-miles in July, 1945.

RYAN

Net profit of \$349,710, equal to 80 cents per share, was reported by the Ryan Aeronautical Company for the fiscal year ended

October 31, 1945. With the annual report, which had been delayed pending settlement of terminated war contracts, T. Claude Ryan, president, also issued an interim report for the six months ended April 31, showing net income of \$277,868, equal to 63 cents per share, for the first half of the current fiscal year.

Value of products manufactured and sold for the 12 months ending October 31 was \$55,745,096. For the first half of the 1946 fiscal year gross income was \$6,405,109. The relatively low profit on the 1945 gross sales dollar was due to cancellation of war contracts after the company had tooled its plant for volume production of Ryan *Fireball* fighters for the Navy, but before the full production rate and maximum manufacturing efficiency had been reached.

Ryan reported to stockholders that the company is now in the strongest financial position in history. Book value as of October 31, 1945, of \$4,078,779 represented \$9.29 per share; and working capital at \$3,580,865 was equal to \$8.15 per share. Due to the accelerated depreciation permissible at the end of the war, buildings, machinery and equipment acquired at an original cost of \$1,917,748, were carried at a book value of only \$278,132.

TRANS-CANADA

Trans-Canada Air Lines carried 1,188 more passengers in the month of June, 1946, than in the previous month. The total number of passengers carried was 23,784. Air express traffic also increased for the month, being 95,262 pounds as compared with 90,051 in May. Air mail showed a decline at 179,826 pounds for

June as against 189,057 pounds in the month of May.

TRANS WORLD

Trans World Airline set a company transcontinental record during the month of June by flying more than 4,000,000 plane-miles. The statistics included 424,942 miles of transcontinental operation by *Constellation* aircraft. *Constellations* were withdrawn temporarily from service on July 11 for mechanical and engineering improvements. The addition of plane-miles flown on TWA's international routes, brought the overall total to 4,750,000 revenue plane-miles.

Air freight revenue mounted to an all-time monthly high of \$62,000 in July, a month of normal seasonal slump, according to R. E. Whitmer, director of cargo sales. Whitmer attributed the 25 percent rise over June revenue to recent tariff changes which brought TWA rates into line with those of other scheduled transcontinental air carriers. Trends during the first half of this year, Whitmer said, indicate that revenue from TWA air freight, as distinct from mail and express cargo, will pass the three-quarter million dollar figure for the year 1946.

UNITED

Air freight and air express flown by United Air Lines during the first half of 1946 showed an increase of more than 40 percent over the same period last year for an all-time record. In the six months, United's *Cargoliners* and *Mainliners* flew approximately 3,530,500 cargo ton-miles as against 2,516,640 in the first half of 1945. Reflecting the loss of servicemen's letters

since the end of the war, air mail in the six months dropped approximately 50 percent to 5,197,500 ton-miles as against 10,518,536 for the first half of 1945.

Air cargo operations in July reached an estimated record of 707,000 ton-miles, an increase of 55 per cent over the same period last year. July's figure also represented a 20 percent increase over June when United flew 589,444 cargo ton-miles. Air mail ton-miles showed a slight increase, totaling approximately 691,000 ton-miles as against 684,003 in June.

All previous records for revenue passenger-miles and revenue airplane-miles flown by United during a single month were broken in July. The airline flew approximately 111,570,000 revenue passenger-miles last month, a 69 percent increase over the same period a year ago and seven percent over June's total of 104,013,322. Revenue airplane miles flown were nearly 4,970,000, up five percent over June's 4,719,897 and 40 percent over July, 1945.

WESTERN

A first-half loss of roughly \$750,000 will be sustained by Western Air Lines, but the airline will break into the black some time during the third quarter, according to a preliminary report on first-half operations issued by the company.

Analyzing first-half profit and loss figures, President William A. Coulter pointed out that the first six months of 1946 have borne the brunt of a huge personnel expansion program which was necessary to obtain and train sufficient employees to operate more planes and activate new routes as rapidly as additional four-motored aircraft are delivered. The first-half loss will be in the neighborhood of \$1.44 per share, Coulter estimated.

Helicopter is Practicable for Air Mail Carriage Post Office Says After Tests in Los Angeles Area

In the opinion of the Post Office Department, the helicopter is a practicable vehicle for the carriage of air mail. After three weeks of experimenting in the Los Angeles area, the helicopter has demonstrated that it can fly and carry mail through the Summer fog with a performance record at least as good as that of conventional aircraft.

The Department disclosed that upon the basis of data furnished by the Civil Aeronautics Board and the Weather Bureau, routes could be flown which would enable the helicopters to pick up and deliver mail on their early morning runs at such times as to avoid fog and still synchronize with carrier schedules. The Board and the Bureau are now preparing maps incorporating this information.

During the experiment, Lockheed Airport at Burbank was the base for operations. From the beginning, it was understood that if approval was given to helicopter air mail service in the Los Angeles area, the Municipal Airport would be used. Two main routes were flown, one following the coast with Long Beach as its southern terminus, the other running inland to Santa Ana. A shuttle route between Lockheed and the Terminal Annex roof of the Los Angeles Post Office was also flown.

The experiment brought out the need for substantial modifications in routes and procedures. If, at the hearing now scheduled by the CAB for September 9, the Department recommends helicopter service

for Los Angeles, the routes suggested undoubtedly will be horizontal loops rather than in the form of the vertical lines flown during the experiment.

Thus, helicopters flying out from the Municipal Airport at six o'clock in the morning could fly, ahead of fog, along the two loops, delivering and picking up mail at each post office. The flight time on the northern loop would be one hour and 42 minutes, and on the southern loop, one hour and 36 minutes. Thirteen post offices would be served on the proposed northern loop, and 11 on the southern loop. In addition, 61 neighboring offices would benefit from the service.

The success of the shuttle service between downtown Los Angeles and the airport was one of the outstanding features of the experiment. The Department, in the event that helicopter service is adopted, would link the Terminal Annex, four other Los Angeles post office stations, Santa Monica and the airport with two morning and two afternoon flights. In addition, 12 direct flights between the Terminal Annex and the airport would be run daily. On the northern and southern loops, morning and afternoon flights are projected.

The helicopters, operated by Army Air Forces personnel in the experiment, were designed for rescue work and not for the carriage of mail. On aircraft adaptable for flying mail, fundamentally different operational techniques would be followed. Using a simple device now available, the

helicopter need not stop to pick up mail. The pick-up would be effected by the helicopter slowing down and having a tilting device bring the mail sack into the aircraft. Deliveries likewise would be made without stopping.

Thus, a helicopter flying the northern loop would slow down over a post office. The pick-up of outgoing mail would be made automatically and the mail destined for that office would be dropped into a net. The pouch would drop down a chute into the post office workroom for immediate processing, as the helicopter sped on to the next office.

Post office inspectors have surveyed all contemplated stops on all routes. With the relocation of electric power lines, helicopters could make pick-ups and deliveries on all the Government buildings involved. This would remove one of the difficulties encountered in the experiment when it becomes necessary to use landing areas at unreasonable distances from post offices.

Consideration is being given to a suggestion that a short wave receiving set be installed at each post office served by helicopter. This would enable the pilot to give information of his approach at an unscheduled time or arrange for the rendering of any needed assistance. Use of radar is not practical for helicopters because of the weight of the device.

Post Office Department officials made an hour-by-hour check of the origin, destination, and volume of air mail in all communities affected, as well as the practicability of the schedules tested and the cost of helicopter service.

Domestic Air Mail Rate Goes Down to 5¢ Oct. 1

Beginning October 1, the air mail postage rate between all United States territory and to members of the armed forces abroad will be reduced to five cents an ounce.

It was almost a year ago, speaking at a Waldorf-Astoria luncheon affair sponsored by the Aviation Section of the New York Board of Trade in commemoration of the 25th anniversary of transcontinental air mail, that Postmaster General Robert E. Hannegan declared his intention of seeking the reduction of the air mail rate from eight cents to five cents.

"Under our economic system," Hannegan said at the time, "our business people know that one of the best and quickest ways to get the American people to buy a good product or use a good service is to lower the cost. There is no public education like the good old American method of offering the people a fair bargain."

"I believe this principle applies to the postal service as well as any other . . . I believe many more people would use air mail if it were cheaper, and I also believe that if many more people did use it, the resulting increased volume would bring down the unit cost of delivery, and, within a reasonably short time, justify the cut."

Non-Scheduled Airlines Are Backed by Wallace To Spur Air Competition

In a protest to the Civil Aeronautics Board, former Secretary of Commerce Henry A. Wallace last month urged it to reconsider an "extremely restrictive" order affecting non-scheduled airlines. He said that they should be allowed to operate so as to promote competition in the air transportation industry, pointing out that the May 17 order by the Board would "close and regulate entry" of non-scheduled groups into business.

Wallace called the order inconsistent with President Truman's policy of "encouraging small business initiative and originality to stimulate competition." He urged the CAB to "set aside the extremely restrictive interpretation and definition" of what constitutes a non-scheduled service and "restore the 'open door' policy under its original exemption order."

Wayfarer Ready

The Bristol *Wayfarer* has been given its certificate of airworthiness from the British Ministry of Aviation. It is the first postwar British aircraft to be fully cleared for transport duty.

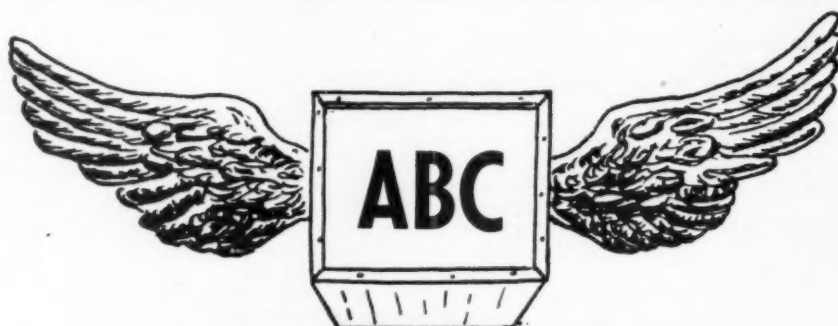
Ryan Admits Interest In Helicopter Field

T. Claude Ryan, president of the Ryan Aeronautical Corporation, has confirmed reports that his company is interested in helicopter development work.

"We have had an active interest in the helicopter type of aircraft for a number of years," he said, "and a considerable amount of engineering and experimental work on rotors and mechanisms has been carried on in recent months. Some extremely interesting and worthwhile development work has been accomplished. This type of aircraft has great possibilities, but a considerable amount of improvement and refinement of present type helicopters is necessary before they reach the stage of substantial practical utility, although that point may not be far away. We are planning to actively continue our present program of helicopter research and development."

New Non-Scheduled Group May be Inaugurated Soon

If plans are successful, a national association of three non-scheduled air carrier groups will be formed. The proposed organization would include the Institute of Air Transportation, the Contract Air Carriers Association of Florida, and Air Transport Operators, Inc., West Coast. A fourth unnamed group has been mentioned as a possible member. The purpose of the new association would be to coordinate all their activities.



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ANOTHER STEP FORWARD

Effective as of August 28, 1946, Air-Borne Cargo Lines have changed their base of operations from Baltimore Municipal Airport to the Millville Municipal Airport, located at Millville, New Jersey, occupying their own hangar with maintenance shop and several buildings.

Air-Borne Cargo Lines, Inc. (formerly Hoosier Air Freight Corp.), announces the removal of its offices from 103 Park Ave. to 160 Broadway, New York 7, N. Y. Telephone: Cortlandt 7-0767-68-69.

J. E. ROGERS, *President*

LEGAL NOTES

on Air Transportation

By GEORGE BOOCHEVER

Chairman of the Legal Committee and
General Counsel to the Aviation Sec-
tion, New York Board of Trade

THE question of the liability of municipalities for injuries arising out of the operation of airports will increase in importance as an incident to the creation of thousands of new municipal airports to meet the growing demand for such facilities. An examination of the reported decisions indicates that diametrically opposite views are held by the courts of different states.

The point of departure in the decisions rests on the determination of the question of whether in the operation of the airport the municipality is engaged in the performance of a "governmental function," that is to say, in the exercise of powers for the benefit of the people generally, by virtue of which it is not liable for negligence in the same manner as private persons or private corporations, or whether its operations constituted "corporate" or "ministerial acts," done in the exercise of its powers as a municipal corporation, for its own benefit or for the benefit of its citizens alone or its citizens and those of its immediate locality.

In an opinion rendered by the Attorney General of Minnesota, February 10, 1945, he points out that the question of the liability for personal injuries by a municipal airport had not been passed upon directly and he, therefore, advised municipal officers, as a matter of precaution, until the question is settled definitely that it would probably be wise for the city to carry public liability insurance.

He also pointed out that the courts of Iowa, Georgia, and Tennessee have held that cities are not liable for damages caused by negligence of city employees, on the theory that the city, in operating the airport, is engaged in a governmental, rather than a proprietary, function. Per contra, the courts of Florida, Texas, California, Oregon, Oklahoma, Michigan and Alabama have held that in such operation a city is engaged in a proprietary function and subject to the same liabilities as a private airport operator.

The Minnesota Supreme Court having held that the operation of a municipal airport is a governmental function and that the fact that certain facilities are leased to private individuals for uses connected with the airport does not destroy the governmental character of the operation, the Attorney General's opinion stated that the best answer he could give to the question was that in Minnesota the court would probably hold with the courts of Iowa, Georgia and Tennessee, that cities are not liable for such damages. How the courts of the states which have not as yet passed upon the question would decide can only be the subject of guesswork, although rulings on analogous situations may give some indication of what the decisions are likely to be.

ATA Says Airlines Utilize Less than Quarter of Total Use of Airfields on Stops

According to the Air Transport Association, operations of the scheduled airlines of the United States utilize less than 25 percent of the total use of all airports on their regular route-stops.

Statistics for the first four months of 1946, taken from the Aircraft Operations Reports of the Civil Aeronautics Administration, reveal that 57 percent of total airport use is attributable to other-than-airline commercial and private operators and 18 percent to Army and Navy.

"These figures should be interesting to those who want to lay the entire burden of airport costs on the airlines," said Robert Ramspeck, ATA executive vice president, "and to those of the public who may have been misled to believe that the airlines dominate the use of airports."

Scheduled airline use of the Federal airways, as contrasted with airports, shows a percentage of 44.6 in the CAA reports, according to Ramspeck. He pointed out, however, that these statistics present a distorted picture, as they are based entirely on filed flight plans, with the scheduled carriers always filing such plans while other fliers usually file them only under instrument conditions. An estimate for 1946 based on complete reports, he said, would probably show airline use of about one-third, or approximately the same as the prewar figure, which fell to about 10 percent during the war years, for both airways and airports.

Another point raised in the ATA survey was that a considerable portion of the publicly-provided facilities are not needed or used by the scheduled airlines.

"This applies to existing airports and airways," Mr. Ramspeck asserted, "and will pertain in even greater degree to the expansion programs contemplated. The scheduled airlines should not be asked to support thousands of airports that will not serve them; nor airway instrumentalities not required in their operations, as for example, intermediate fields, beacon lights, communications stations (the lines have their own) or low power fan markers."

"We must not lose sight of the role of the airlines in the amazing growth of air transportation. The big factor was pioneering, which cannot be calculated in terms of dollars and cents, whether paid out by the Government or the carriers; pioneering which build up the greatest air transport system in the world, credited with playing a major part in helping win the war. Through difficult days of peace and war the airlines experimented to perfect an operation which others now arrive on the scene to enjoy in full swing. When charges for the airways are discussed, let's not forget that all except the scheduled carriers need operate only when loads make trips profitable. It is the scheduled airlines which must operate their allotted flights day in and day out, without regard to the size of their load or profit."

Norseman Ferries Planes

Norseman Air Transport has been ferrying aircraft overseas for several months. The planes shuttled across to date have been surplus Government aircraft which have been purchased by civilian airlines in foreign countries.

HANGAR FLYING

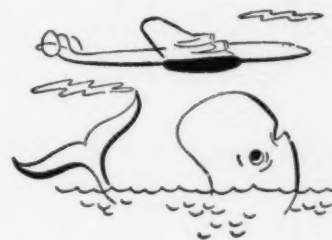


The Whaleboat

In Building 82 at Burbank, engineers have been fussing over a remarkable object that looks like a dural whaleboat on wheels. It's the *Constellation's* new Speedpak and it's a lot more useful than a whaleboat, except maybe to whalers.

With the Speedpak, fast handling of air cargo is made possible for the first time.

This is the way it works: The Speedpak is loaded independently of the ship (which may be in service somewhere else at the time.) When the plane arrives, the Speedpak is attached to the bottom of the fuselage. Off the *Constellation* flies with the Speedpak clinging to its



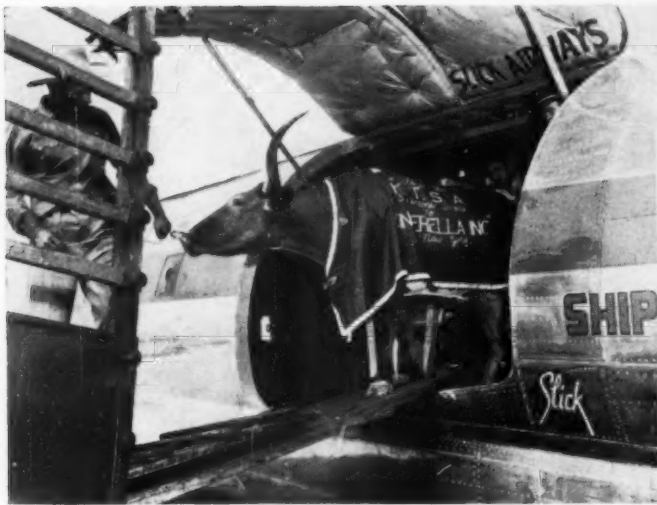
belly, full of over four tons of additional cargo. At any stop the Speedpak can be lowered, loaded and lifted in a matter of minutes.

For all its 395 cubic-foot capacity, the Speedpak slows the plane down less than 10 mph, which is peanuts for the five-mile-a-minute *Constellation*.

The Speedpak is a new solution to the cargo problem. But new ideas are old stuff at Lockheed—ideas that make good hangar flying and better air transport.

L to L for L

© 1946, Lockheed Aircraft Corp., Burbank, Calif.



AIR CARGO IN A BIG WAY . . . It's all in a day's work, as Slick Airways demonstrates, whether it's a Texas longhorn steer or an industrial truck. That steer is Ferdinand, which was flown from San Antonio to New York to appear on the Columbia Broadcasting program, *Cinderella, Inc.* Ferdinand did all right for himself, too. The vehicle being lifted into the C-46 cargo plane is a Clark Utilitrac which weighs 10,450 pounds. It represents the first commercial attempt to fly a heavy fork lift truck direct from the factory to the customer complete. The machine was transported from Battle Creek, Michigan, to San Antonio.

Havana Landing Rights Are Granted to Aaxico

American Air Export and Import Company (Aaxico) has been granted landing rights in Havana by the Cuban Government. The inaugural New York-Havana flight is set for September 15. Aaxico's office in the Cuban capital is located in the National Theatre Building.

Two More Air Cargo Carriers Join IAA

The Commander Line and Flamingo Air Service have become the fourth and fifth air cargo lines to join the recently organized Independent Airfreight Association. Charter members of the organization are Slick Airways, National Skyway Freight Corporation, and United States Airlines.

Santa Fe Flies Food On Inaugural Trip

Santa Fe Skyway's inaugural flight was made recently with a planeload of perishables from Los Angeles to Chicago. Aboard were fuzzless peaches, swordfish, cranshaw melons, and fresh strawberries.

The airline operates between Chicago, the Gulf, and the West Coast.

TRI-CITY AVIATION SERVICE INCORPORATED

Millville Municipal Airport
Millville, New Jersey

Tri-City Aviation Service, Inc., managing the Millville Municipal Airport, invites your inspection of this Class IV Airport and offers the following facilities:

Four — 5000' Runways
Night Illumination

Teletype
Restaurant

Office, Warehouse and Shop Space

Millville Municipal Airport is only a few minutes' flying time to all the major industrial areas such as New York, Washington, Philadelphia, Baltimore, etc. Tri-City, in conjunction with Airwork Corporation, offers the ultimate in licensed aircraft maintenance. A representative will be glad to discuss with you your maintenance problems. Let Tri-City lower your maintenance costs: Phone Millville 2.

Announcing

the opening on November 1, 1946
of

AIRWORK CORPORATION

Aviation Maintenance

This major engine overhaul shop, to be certified by C.A.A., will be planned according to Pratt & Whitney standards, and initially will overhaul Pratt & Whitney 1830-92 engines . . . Accessible to railroad and trucking facilities . . . Fast engine-change service available at airport . . . Information and quotations given upon inquiry . . . Inspection of shop facilities and service encouraged after November 1, 1946.

Sales Office

Room 1603
55 Liberty Street, New York City, N. Y.
Tel.: Rector 2-9329

Plant

Millville Municipal Airport
Millville, New Jersey
Tel.: Millville 954

Air Cargo MOSAIC

We are reminded of the wartime operations of enemy spies in this country who gained considerable information by hanging out in waterfront taverns and war industry boomtown cafeterias, plucking a stray word here and there, and submitting the snatches to their local headquarters. These were sorted, mullied over, arranged, and rearranged, like so many tiles, until the desired picture began gradually to form.

In hardly so insidious a vein do the writers of this magazine sift the air cargo information as it is received through divers channels; but the net result is the same: the piecing together of a mosaic, which, in due time, tells a complete story.

The last report of the Bureau of the Census, Department of Commerce, which covered the first five-month period of the current year, showed that after a substantial drop in air exports in February as compared with January, a steady rise was registered. After descending to a low point of some \$4,000,000 in value for February, air exports quickly recovered, and, at the last reckoning, had gone beyond \$9,000,000 for a month's business.

In contrast, the value of air imports, which had been near the \$5,000,000 mark in March, decreased during the next two months by approximately 20 percent. But opposite this record in air import values was one of air shipping weight which showed steady gains. Thus, while the dollar value of the shipments coming by air into this country headed downward during April and May, in terms of weight an opposite direction was effected.

Now, from the Civil Aeronautics Board, we hear another story—to all appearances an entirely unrelated one.

Information, incomplete at the time of this writing, indicated that, as a unit, the non-scheduled industry was on the wrong side of the ledger. Such big fellows like Slick Airways had reported a two-month loss of \$123,463; National Skyway Freight Corporation, \$76,979 in May; and Air Cargo Transport Corporation, \$66,402. Fifty-six percent of the Slick loss figure was chalked up against development expense to be amortized over a five-year period. ACT explained that some of its planes were undergoing reconversion and hence could not be placed into service.

There were other smaller companies writing in red ink—Bruning, California Eastern, National Air Cargo, Meteor, Viking, etc.—but here losses were in the lower brackets. On the other hand, there were non-scheduled operators who reported profits. Among this group were Air Freight, Pacific Overseas, Fireball, Lone Star, Hoosier (now Air-Borne Cargo), and Airgo. To be sure, there were others, but the overall picture remained with a scarlet hue.

For the purpose of this article, the fact that losses have been rather prevalent among the uncertificated airlines is not of particular interest. It had been predicted a long time ago. None of the operators had expected to make money during the formative period, and if they did it was all to the good.

But what interests us is the news that many of the passenger-carrying outfits are beginning to cast covetous eyes on the air cargo business. Reorganization along these lines is in the air. We know of at least two big companies who, within the last few weeks, have ordered special air freight studies in certain areas.

The certificated airlines have joined the air freight rush with a vengeance. Latest of the entrants have been Delta Air Lines and National Airlines. These must now be added to American, Braniff, Continental, Inland, PCA, TWA, United, and Western. Consider, too, the extension of international routes, and the picture takes on added significance. Another important development is the rising interest of the freight forwarders in the air freight field, and the CAB applications of a number of these firms.

How do the reports of the Bureau of Commerce, Civil Aeronautics Board, and the airlines fit the mosaic? In the simplest terms it all boils down to the recognition that air cargo no longer is an infant on wobbly legs. Although we firmly believe in what we have often termed the tremendous future of air cargo—domestic and international—it is hardly that at this early stage of the game, only 13 months removed from the end of the war. But we do maintain that it has dropped its diapers for a more substantial and presentable garment.

DESIGNATED AIRCRAFT MAINTENANCE INSPECTORS FOR NON-SCHEDULED AIRCRAFT

(Civil Aeronautics Administration)

REGIONS 5 TO 7 INCLUSIVE

REGION 5

Designation No.	Name and Mailing Address	Fixed Base of Operation	Designation No.	Name and Mailing Address	Fixed Base of Operation	Designation No.	Name and Mailing Address	Fixed Base of Operation
561	Alco, Harold B. P. O. Box 844 Sterling, Col.	Municipal Airport Sterling, Col.	6215	Hickenbooper, Jay W. 419A Hyland Drive Salinas, Calif.	Salinas Airport Salinas, Calif.	735	Banks, Larry H. 607 East 3rd St. Ellensburg, Wash.	Kent Airport Kent, Wash.
562	Alexander, Orville H. P. O. Box 51 Spearsfish, S. D.	Black Hills Flying Service Spearsfish, S. D.	68	Johnson, Elmer L. 719 Karwah Ave. Vernalis, Calif.	Municipal Airport Tulare, Calif.	740	Bliss, Harold T. 327 East Oak St. Walla Walla, Wash.	Walla Walla, Wash.
563	Allison, Dale O. Municipal Airport, Box 167 Lawrence, Kan.	Municipal Airport Lawrence, Kan.	676	Jorgensen, Laurence E. 56 So. 3rd E. Salt Lake City, Utah	Salt Lake Airport #1 Salt Lake City, Utah	766	Burke, Virgil Jacob 1284 N. Holland St. Portland, Ore.	B & H Flying Service Airport Cottage Grove, Ore.
564	Atkins, Earl 715 Independence St. Pella, Iowa	Municipal Airport Pella, Iowa	677	Kearney, Charles R. 549 Swarthmore Ave. Pacific Palisades, Calif.	Lomita, Calif.	714	Burke, Virgil Jacob 1284 N. Holland St. Portland, Ore.	Vancouver Airport Vancouver, Wash.
565	Bailey, Howard E. 409 N. Toppa St. El Dorado, Kan.	Bayley Flying Service El Dorado, Kan.	697	Kemp, David M. 207 So. 27th E. Salt Lake City, Utah	Midvale, Utah	760	Carters, Glen T. P. O. Box 1227 Postville, Ida.	Postville Flying Service Postville, Ida.
566	Baker, Robert H. 928 East Promenade Mexico, Mo.	Green Field Mexico, Mo.	681	Knox, Fred Nelson 356 Steadman Place Monrovia, Calif.	CAA Hanger, Clover Field Santa Monica, Calif.	744	Cassidy, Arnold J. 6701 Pacific Ave. Tacoma 4, Wash.	Tacoma Airport, Inc. Tacoma, Wash.
567	Bergan, Teunis G. 1227 Cecelia St. Denver, Col.	Rutledge Field Depot, Col.	684	Lamm, Chin Non 526 E St., Dmard, Calif.	Dmard Airport Dmard, Calif.	7380	Chapman, Robert E. 6815 S. E. 92 Ave. Portland 6, Ore.	Salem Municipal Airport Salem, Ore.
568	Bernhardt, Fred D. 713 Riell St. Waterloo, Iowa	Chapman Field Waterloo, Iowa	61	Long, Floyd E. 1234 E. Virginia St. Phoenix, Ariz.	Long Aircraft Service Sky Harbor Airport Phoenix, Ariz.	757	Cox, Clifford H. 323 W. Young Ave. Billings, Mont.	Senior High School Hanger Billings, Mont.
569	Bloss, Donald A. 415 East Adams St. Crawford, Kan.	Pittsburg, Kan.	604	Lyons, Paul R. 2839 Pacific St. San Diego, Calif.	Salinas Airport Salinas, Calif.	733	Cox, Robert LeRoy 10 W. 33rd Ave. Spokane, Wash.	Spokane, Wash.
570	Bonham, Clyde J. 1300 East 21st St. Cheyenne, Wyo.	Cheyenne, Wyo.	6207	Martin, Roland H. 2019—66th Ave. Oakland, Calif.	Salinas Airport Salinas, Calif.	763	Crack, Maynard T. Hay Field, P. O. Box 409 Pocatello, Ida.	May Field Pocatello, Ida.
571	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	660	Matejka, Ervin Merlin 133 Syracuse Walk Long Beach, Calif.	Municipal Airport Long Beach, Calif.	7281	Douglas, George F. 2309 S. Commercial Salem, Ore.	Albany Airport Albany, Ore.
572	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	632	McLoran, Hugh A. Provo, Utah	Provo Airport Provo, Utah	7366	Edmondson, George S. 2034 Hudson St. Seattle, Wash.	Seattle, Wash.
573	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	692	Meinert, William A. P. O. Box 371 Reno, Nev.	Reno Sky Ranch Reno, Nev.	747	Eaton, Joe W. 4219 So. Anoda Tacoma, Wash.	Forest Grove Airport Forest Grove, Ore.
574	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	682	Meyenberg, Maurice N. 324—18th St. Santa Monica, Calif.	Metropolitan Airport San Noy, Calif.	729	Felt, George Harold Rt. 2, Box 131-A Roseburg, Ore.	Roseburg Airport Roseburg, Ore.
575	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	62	Mortensen, Ardele R. P. O. Box 1187 Ogden, Utah	Robert H. Hinchley Airport Ogden, Utah	745	Fillmore, Theodore G. P. O. Box 1025 Miles City, Mont.	Miles City, Mont.
576	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	645	Nystrom, John P. 405 Rummymede Ave. Palo Alto, Calif.	Wickensham Airport Safford, Ariz.	712	Gulley, Maxwell P. Route 4, Box 410-A Medford, Ore.	Medford Municipal Airport Medford, Ore.
577	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	673	Patterson, Kenneth O. Route 7, Box 309 Phoenix, Ariz.	March & Franklin Sky Harbor Airport Phoenix, Ariz.	745	Gulley, Gustave T. 1224 H. H. St. Seattle 8, Wash.	Kitsap County Airport Bremerton, Wash.
578	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	683	Finard, Clifford D. 155 Adams Ave. Hawthorne, Calif.	Hawthorne Aircraft Ind. Hawthorne, Calif.	72	Hahn, Harold H. 1423 Boeing Road, Rt. #1 Opportunity, Wash.	Wallace Air Service Spokane, Wash.
579	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	667	Poor, John B. 1305 Eighth Ave., Box 472 Safford, Ariz.	Wickensham Airport Safford, Ariz.	766	Harris, William P. Rt. 2, Box 561 A Bellevue, Wash.	Bellevue, Wash.
580	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	6312	Pritchard, Arthur C. 5200 Buena Vista San Bernardino, Calif.	Warren & Day Airport San Bernardino, Calif.	75	Hill, Wilbur H. 4700 W. 1st St. Spokane, Wash.	Wallace Air Service Spokane, Wash.
581	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	6908	Porter, Paul W. 5444 Maxwell Ave. Oakland, Calif.	Cabot Airport Oakland, Calif.	726	Flower, Arthur N. P.O. Box 2205 Spokane, Wash.	Ellison Army Service Spokane, Wash.

REGION 6

545	Dyer, James E. 780 Forest St. Denver 7, Col.	Hayden Field Denver, Col.	656	Allison, Roy A. P. O. Box 583 Alturas, Calif.	Culver City Airport Culver City, Calif.	743	Leung, Joe L. 1227 So. 1st St. Spokane 12, Wash.	Lanning & E Service Spokane, Wash.
546	Phillip Bullard Field Topsfield, Mass.	Phillip Bullard Field Topsfield, Mass.	657	Aranson, Theodore F. 12318 Grease Ave. Stockton, California	Culver City Airport Culver City, Calif.	741	Lenon, Loren W. Vernadale, Wash.	Lenon Airport Vernadale, Wash.
547	Hayden Field Denver, Col.	Hayden Field Denver, Col.	658	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa	763	McNees, Delbert W. Goodling Airport	Goodling Airport
548	Hayden Field Denver, Col.	Hayden Field Denver, Col.	659	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
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602	Hayden Field Denver, Col.	Hayden Field Denver, Col.	713	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
603	Hayden Field Denver, Col.	Hayden Field Denver, Col.	714	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
604	Hayden Field Denver, Col.	Hayden Field Denver, Col.	715	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
605	Hayden Field Denver, Col.	Hayden Field Denver, Col.	716	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
606	Hayden Field Denver, Col.	Hayden Field Denver, Col.	717	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
607	Hayden Field Denver, Col.	Hayden Field Denver, Col.	718	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
608	Hayden Field Denver, Col.	Hayden Field Denver, Col.	719	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
609	Hayden Field Denver, Col.	Hayden Field Denver, Col.	720	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
610	Hayden Field Denver, Col.	Hayden Field Denver, Col.	721	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
611	Hayden Field Denver, Col.	Hayden Field Denver, Col.	722	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
612	Hayden Field Denver, Col.	Hayden Field Denver, Col.	723	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
613	Hayden Field Denver, Col.	Hayden Field Denver, Col.	724	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
614	Hayden Field Denver, Col.	Hayden Field Denver, Col.	725	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
615	Hayden Field Denver, Col.	Hayden Field Denver, Col.	726	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
616	Hayden Field Denver, Col.	Hayden Field Denver, Col.	727	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
617	Hayden Field Denver, Col.	Hayden Field Denver, Col.	728	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
618	Hayden Field Denver, Col.	Hayden Field Denver, Col.	729	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
619	Hayden Field Denver, Col.	Hayden Field Denver, Col.	730	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
620	Hayden Field Denver, Col.	Hayden Field Denver, Col.	731	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
621	Hayden Field Denver, Col.	Hayden Field Denver, Col.	732	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
622	Hayden Field Denver, Col.	Hayden Field Denver, Col.	733	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
623	Hayden Field Denver, Col.	Hayden Field Denver, Col.	734	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
624	Hayden Field Denver, Col.	Hayden Field Denver, Col.	735	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
625	Hayden Field Denver, Col.	Hayden Field Denver, Col.	736	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
626	Hayden Field Denver, Col.	Hayden Field Denver, Col.	737	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
627	Hayden Field Denver, Col.	Hayden Field Denver, Col.	738	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
628	Hayden Field Denver, Col.	Hayden Field Denver, Col.	739	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
629	Hayden Field Denver, Col.	Hayden Field Denver, Col.	740	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
630	Hayden Field Denver, Col.	Hayden Field Denver, Col.	741	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
631	Hayden Field Denver, Col.	Hayden Field Denver, Col.	742	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
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633	Hayden Field Denver, Col.	Hayden Field Denver, Col.	744	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
634	Hayden Field Denver, Col.	Hayden Field Denver, Col.	745	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
635	Hayden Field Denver, Col.	Hayden Field Denver, Col.	746	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
636	Hayden Field Denver, Col.	Hayden Field Denver, Col.	747	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
637	Hayden Field Denver, Col.	Hayden Field Denver, Col.	748	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
638	Hayden Field Denver, Col.	Hayden Field Denver, Col.	749	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
639	Hayden Field Denver, Col.	Hayden Field Denver, Col.	750	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
640	Hayden Field Denver, Col.	Hayden Field Denver, Col.	751	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
641	Hayden Field Denver, Col.	Hayden Field Denver, Col.	752	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
642	Hayden Field Denver, Col.	Hayden Field Denver, Col.	753	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
643	Hayden Field Denver, Col.	Hayden Field Denver, Col.	754	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
644	Hayden Field Denver, Col.	Hayden Field Denver, Col.	755	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
645	Hayden Field Denver, Col.	Hayden Field Denver, Col.	756	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
646	Hayden Field Denver, Col.	Hayden Field Denver, Col.	757	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
647	Hayden Field Denver, Col.	Hayden Field Denver, Col.	758	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
648	Hayden Field Denver, Col.	Hayden Field Denver, Col.	759	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
649	Hayden Field Denver, Col.	Hayden Field Denver, Col.	760	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
650	Hayden Field Denver, Col.	Hayden Field Denver, Col.	761	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
651	Hayden Field Denver, Col.	Hayden Field Denver, Col.	762	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
652	Hayden Field Denver, Col.	Hayden Field Denver, Col.	763	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
653	Hayden Field Denver, Col.	Hayden Field Denver, Col.	764	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
654	Hayden Field Denver, Col.	Hayden Field Denver, Col.	765	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
655	Hayden Field Denver, Col.	Hayden Field Denver, Col.	766	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
656	Hayden Field Denver, Col.	Hayden Field Denver, Col.	767	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
657	Hayden Field Denver, Col.	Hayden Field Denver, Col.	768	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
658	Hayden Field Denver, Col.	Hayden Field Denver, Col.	769	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
659	Hayden Field Denver, Col.	Hayden Field Denver, Col.	770	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
660	Hayden Field Denver, Col.	Hayden Field Denver, Col.	771	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			
661	Hayden Field Denver, Col.	Hayden Field Denver, Col.	772	Brace, Harry E. W. 121 South 2nd St. Estherville, Iowa	Municipal Airport Estherville, Iowa			

540	Gregg, DuBert L. 316 Venation St. Pueblo, Colo.	Municipal Airport Pueblo, Colo.	541	557, 558 R. D. 6, Box 740 Salt Lake City, Utah	Utah County Airport Salt Lake City, Utah	542	559 Ruyner, Eugene N. 4225 South Salt Lake City, Utah	543	560 Ruyner, Eugene N. 4225 South Salt Lake City, Utah	544	561 Cassins, Charles Route 1, Box 682 Petaluma, Calif.	545	562 Christensen, Dall L. 1625 South St. Long Beach 5, Calif.	546	563 Clements, Millard L. 130 West Luna St. Tucson, Ariz.	547	564 Conroy, James F. 1009 Keener Place Long Beach, Calif.	548	565 Cook, Lewis J. 2121 Henderson Montebello, Calif.	549	566 Cook, Roy W. 2417 Chester Ave. Bakersfield, Calif.	550	567 Craw, Donald L. 847 Beech St. Laurel, Calif.	551	568 Cytton, Otto M. 876 No. Muscatel Ave. San Gabriel, Calif.	552	569 Davis, Clifford E. Route 8, Box 486-B 44 N. 26th St. Phoenix, Ariz.	553	570 Deering, Stanley R. 2324 North Parish Place Burbank, Calif.	554	571 Douglas, Walter, Jr. Box 4187, University Station, Tucson, Ariz.	555	572 Eabpeter, Lawrence H. 304-40th St. Oakland 9, Calif.	556	573 Farrell, Walter D. 948-10th St. Santa Monica, Calif.	557	574 Fack, Allan M., Jr. 110 Philip St. Carson City, Nev.	558	575 Franklin, William W. 204 North Nevada Carson City, Nev.	559	576 Gibbs, William H., Jr. P. O. Box 327 Hillcrest Station San Diego, Calif.	560	577 Gilbert, Alexander 358 North 4th St. Logan, Utah	561	578 Grieve, Floyd G. P. O. Box 136 Minden, Nev.	562	579 Gould, Clifford E. P. O. Box 697, Reno, Nev.	563	580 Hager, Joseph G. P. O. Box 986 Santa Ana, Calif.	564	581 Hamilton, James A. Route 3, Box 183 San Jose, Calif.	565	582 Hawkins, John H. Oranges Bros. Airport Stockton, Calif.	566	583 Hibbard, Horace E. P. O. Box 688 Auburn, Calif.	567	584 Hobbs, Earl W. 1944 South Water St. Wichita, Kan.	568	585 Harris, Robert V. 1427 William St. Cape Girardeau, Mo.	569	586 Hart, Dale C. Moberly Flying Service Moberly, Mo.	570	587 Howard, Earl J. P. O. Box 465 Ames, Iowa	571	588 Hugelen, Sylvan O. Municipal Airport Mason City, Iowa	572	589 Jackson, Carl B. 3223 Pioneer Ave. Cheyenne, Wyo.	573	590 Jordan, Fred D. 2020 E. Harry St. Wichita, Kan.	574	591 King, Lyle C. Route 10, Kelsey Road North Kansas City, Mo.	575	592 Lachter, Kenneth A. P. O. Box 508 Sioux Falls, S. D.	576	593 Lambert, John Henry Box 274, Coffeyville, Kan.	577	594 Lohse, Joseph H. P. O. Box 61 Sheridan, Wyo.	578	595 Loose, Chester 2015 Harrison St. Davenport, Iowa	579	596 McIntire, Robert E. 4364 Devonshire Ave. St. Louis, Mo.	580	597 McFarland, Ernest H. 310 E. McDaniel St. Springfield, Mo.	581	598 McGarvey, Clarence W. St. Charles Airport St. Charles, Mo.	582	599 Moochart, Mark W. Box 432, Ames, Iowa	583	600 Neim, Carl E. 7127 Burlington Ave. Lincoln, Neb.	584	601 Reiber, Curtis D. 2025 East 26th Ave. Denver, Colo.	585	602 Riggs, Earl W. 1944 South Water St. Wichita, Kan.	586	603 Riggs, Kenneth J. 2223 N. Kansas St. Wichita, Kan.	587	604 Ruppel, Alton D. Box 62, Waysside, Kan.	588	605 Roberts, Harold E. 3225 Marshall Road Overland, Mo.	589	606 Romano, Alfred R. Route 23 Dodge City, Kan.	590	607 Rosen, Robert 3225 Marshall Road Overland, Mo.	591	608 Rosen, Robert 3225 Marshall Road Overland, Mo.	592	609 Rosen, Robert 3225 Marshall Road Overland, Mo.	593	610 Rosen, Robert 3225 Marshall Road Overland, Mo.	594	611 Rosen, Robert 3225 Marshall Road Overland, Mo.	595	612 Rosen, Robert 3225 Marshall Road Overland, Mo.	596	613 Rosen, Robert 3225 Marshall Road Overland, Mo.	597	614 Rosen, Robert 3225 Marshall Road Overland, Mo.	598	615 Rosen, Robert 3225 Marshall Road Overland, Mo.	599	616 Rosen, Robert 3225 Marshall Road Overland, Mo.	600	617 Rosen, Robert 3225 Marshall Road Overland, Mo.	601	618 Rosen, Robert 3225 Marshall Road Overland, Mo.	602	619 Rosen, Robert 3225 Marshall Road Overland, Mo.	603	620 Rosen, Robert 3225 Marshall Road Overland, Mo.	604	621 Rosen, Robert 3225 Marshall Road Overland, Mo.	605	622 Rosen, Robert 3225 Marshall Road Overland, Mo.	606	623 Rosen, Robert 3225 Marshall Road Overland, Mo.	607	624 Rosen, Robert 3225 Marshall Road Overland, Mo.	608	625 Rosen, Robert 3225 Marshall Road Overland, Mo.	609	626 Rosen, Robert 3225 Marshall Road Overland, Mo.	610	627 Rosen, Robert 3225 Marshall Road Overland, Mo.	611	628 Rosen, Robert 3225 Marshall Road Overland, Mo.	612	629 Rosen, Robert 3225 Marshall Road Overland, Mo.	613	630 Rosen, Robert 3225 Marshall Road Overland, Mo.	614	631 Rosen, Robert 3225 Marshall Road Overland, Mo.	615	632 Rosen, Robert 3225 Marshall Road Overland, Mo.	616	633 Rosen, Robert 3225 Marshall Road Overland, Mo.	617	634 Rosen, Robert 3225 Marshall Road Overland, Mo.	618	635 Rosen, Robert 3225 Marshall Road Overland, Mo.	619	636 Rosen, Robert 3225 Marshall Road Overland, Mo.	620	637 Rosen, Robert 3225 Marshall Road Overland, Mo.	621	638 Rosen, Robert 3225 Marshall Road Overland, Mo.	622	639 Rosen, Robert 3225 Marshall Road Overland, Mo.	623	640 Rosen, Robert 3225 Marshall Road Overland, Mo.	624	641 Rosen, Robert 3225 Marshall Road Overland, Mo.	625	642 Rosen, Robert 3225 Marshall Road Overland, Mo.	626	643 Rosen, Robert 3225 Marshall Road Overland, Mo.	627	644 Rosen, Robert 3225 Marshall Road Overland, Mo.	628	645 Rosen, Robert 3225 Marshall Road Overland, Mo.	629	646 Rosen, Robert 3225 Marshall Road Overland, Mo.	630	647 Rosen, Robert 3225 Marshall Road Overland, Mo.	631	648 Rosen, Robert 3225 Marshall Road Overland, Mo.	632	649 Rosen, Robert 3225 Marshall Road Overland, Mo.	633	650 Rosen, Robert 3225 Marshall Road Overland, Mo.	634	651 Rosen, Robert 3225 Marshall Road Overland, Mo.	635	652 Rosen, Robert 3225 Marshall Road Overland, Mo.	636	653 Rosen, Robert 3225 Marshall Road Overland, Mo.	637	654 Rosen, Robert 3225 Marshall Road Overland, Mo.	638	655 Rosen, Robert 3225 Marshall Road Overland, Mo.	639	656 Rosen, Robert 3225 Marshall Road Overland, Mo.	640	657 Rosen, Robert 3225 Marshall Road Overland, Mo.	641	658 Rosen, Robert 3225 Marshall Road Overland, Mo.	642	659 Rosen, Robert 3225 Marshall Road Overland, Mo.	643	660 Rosen, Robert 3225 Marshall Road Overland, Mo.	644	661 Rosen, Robert 3225 Marshall Road Overland, Mo.	645	662 Rosen, Robert 3225 Marshall Road Overland, Mo.	646	663 Rosen, Robert 3225 Marshall Road Overland, Mo.	647	664 Rosen, Robert 3225 Marshall Road Overland, Mo.	648	665 Rosen, Robert 3225 Marshall Road Overland, Mo.	649	666 Rosen, Robert 3225 Marshall Road Overland, Mo.	650	667 Rosen, Robert 3225 Marshall Road Overland, Mo.	651	668 Rosen, Robert 3225 Marshall Road Overland, Mo.	652	669 Rosen, Robert 3225 Marshall Road Overland, Mo.	653	670 Rosen, Robert 3225 Marshall Road Overland, Mo.	654	671 Rosen, Robert 3225 Marshall Road Overland, Mo.	655	672 Rosen, Robert 3225 Marshall Road Overland, Mo.	656	673 Rosen, Robert 3225 Marshall Road Overland, Mo.	657	674 Rosen, Robert 3225 Marshall Road Overland, Mo.	658	675 Rosen, Robert 3225 Marshall Road Overland, Mo.	659	676 Rosen, Robert 3225 Marshall Road Overland, Mo.	660	677 Rosen, Robert 3225 Marshall Road Overland, Mo.	661	678 Rosen, Robert 3225 Marshall Road Overland, Mo.	662	679 Rosen, Robert 3225 Marshall Road Overland, Mo.	663	680 Rosen, Robert 3225 Marshall Road Overland, Mo.	664	681 Rosen, Robert 3225 Marshall Road Overland, Mo.	665	682 Rosen, Robert 3225 Marshall Road Overland, Mo.	666	683 Rosen, Robert 3225 Marshall Road Overland, Mo.	667	684 Rosen, Robert 3225 Marshall Road Overland, Mo.	668	685 Rosen, Robert 3225 Marshall Road Overland, Mo.	669	686 Rosen, Robert 3225 Marshall Road Overland, Mo.	670	687 Rosen, Robert 3225 Marshall Road Overland, Mo.	671	688 Rosen, Robert 3225 Marshall Road Overland, Mo.	672	689 Rosen, Robert 3225 Marshall Road Overland, Mo.	673	690 Rosen, Robert 3225 Marshall Road Overland, Mo.	674	691 Rosen, Robert 3225 Marshall Road Overland, Mo.	675	692 Rosen, Robert 3225 Marshall Road Overland, Mo.	676	693 Rosen, Robert 3225 Marshall Road Overland, Mo.	677	694 Rosen, Robert 3225 Marshall Road Overland, Mo.	678	695 Rosen, Robert 3225 Marshall Road Overland, Mo.	679	696 Rosen, Robert 3225 Marshall Road Overland, Mo.	680	697 Rosen, Robert 3225 Marshall Road Overland, Mo.	681	698 Rosen, Robert 3225 Marshall Road Overland, Mo.	682	699 Rosen, Robert 3225 Marshall Road Overland, Mo.	683	700 Rosen, Robert 3225 Marshall Road Overland, Mo.	684	701 Rosen, Robert 3225 Marshall Road Overland, Mo.	685	702 Rosen, Robert 3225 Marshall Road Overland, Mo.	686	703 Rosen, Robert 3225 Marshall Road Overland, Mo.	687	704 Rosen, Robert 3225 Marshall Road Overland, Mo.	688	705 Rosen, Robert 3225 Marshall Road Overland, Mo.	689	706 Rosen, Robert 3225 Marshall Road Overland, Mo.	690	707 Rosen, Robert 3225 Marshall Road Overland, Mo.	691	708 Rosen, Robert 3225 Marshall Road Overland, Mo.	692	709 Rosen, Robert 3225 Marshall Road Overland, Mo.	693	710 Rosen, Robert 3225 Marshall Road Overland, Mo.	694	711 Rosen, Robert 3225 Marshall Road Overland, Mo.	695	712 Rosen, Robert 3225 Marshall Road Overland, Mo.	696	713 Rosen, Robert 3225 Marshall Road Overland, Mo.	697	714 Rosen, Robert 3225 Marshall Road Overland, Mo.	698	715 Rosen, Robert 3225 Marshall Road Overland, Mo.	699	716 Rosen, Robert 3225 Marshall Road Overland, Mo.	700	717 Rosen, Robert 3225 Marshall Road Overland, Mo.	701	718 Rosen, Robert 3225 Marshall Road Overland, Mo.	702	719 Rosen, Robert 3225 Marshall Road Overland, Mo.	703	720 Rosen, Robert 3225 Marshall Road Overland, Mo.	704	721 Rosen, Robert 3225 Marshall Road Overland, Mo.	705	722 Rosen, Robert 3225 Marshall Road Overland, Mo.	706	723 Rosen, Robert 3225 Marshall Road Overland, Mo.	707	724 Rosen, Robert 3225 Marshall Road Overland, Mo.	708	725 Rosen, Robert 3225 Marshall Road Overland, Mo.	709	726 Rosen, Robert 3225 Marshall Road Overland, Mo.	710	727 Rosen, Robert 3225 Marshall Road Overland, Mo.	711	728 Rosen, Robert 3225 Marshall Road Overland, Mo.	712	729 Rosen, Robert 3225 Marshall Road Overland, Mo.	713	730 Rosen, Robert 3225 Marshall Road Overland, Mo.	714	731 Rosen, Robert 3225 Marshall Road Overland, Mo.	715	732 Rosen, Robert 3225 Marshall Road Overland, Mo.	716	733 Rosen, Robert 3225 Marshall Road Overland, Mo.	717	734 Rosen, Robert 3225 Marshall Road Overland, Mo.	718	735 Rosen, Robert 3225 Marshall Road Overland, Mo.	719	736 Rosen, Robert 3225 Marshall Road Overland, Mo.	720	737 Rosen, Robert 3225 Marshall Road Overland, Mo.	721	738 Rosen, Robert 3225 Marshall Road Overland, Mo.	722	739 Rosen, Robert 3225 Marshall Road Overland, Mo.	723	740 Rosen, Robert 3225 Marshall Road Overland, Mo.	724	741 Rosen, Robert 3225 Marshall Road Overland, Mo.	725	742 Rosen, Robert 3225 Marshall Road Overland, Mo.	726	743 Rosen, Robert 3225 Marshall Road Overland, Mo.	727	744 Rosen, Robert 3225 Marshall Road Overland, Mo.	728	745 Rosen, Robert 3225 Marshall Road Overland, Mo.	729	746 Rosen, Robert 3225 Marshall Road Overland, Mo.	730	747 Rosen, Robert 3225 Marshall Road Overland, Mo.	731	748 Rosen, Robert 3225 Marshall Road Overland, Mo.	732	749 Rosen, Robert 3225 Marshall Road Overland, Mo.	733	750 Rosen, Robert 3225 Marshall Road Overland, Mo.	734	751 Rosen, Robert 3225 Marshall Road Overland, Mo.	735	752 Rosen, Robert 3225 Marshall Road Overland, Mo.	736	753 Rosen, Robert 3225 Marshall Road Overland, Mo.	737	754 Rosen, Robert 3225 Marshall Road Overland, Mo.	738	755 Rosen, Robert 3225 Marshall Road Overland, Mo.	739	756 Rosen, Robert 3225 Marshall Road Overland, Mo.	740	757 Rosen, Robert 3225 Marshall Road Overland, Mo.	741	758 Rosen, Robert 3225 Marshall Road Overland, Mo.	742	759 Rosen, Robert 3225 Marshall Road Overland, Mo.	743	760 Rosen, Robert 3225 Marshall Road Overland, Mo.	744	761 Rosen, Robert 3225 Marshall Road Overland, Mo.	745	762 Rosen, Robert 3225 Marshall Road Overland, Mo.	746	763 Rosen, Robert 3225 Marshall Road Overland, Mo.	747	764 Rosen, Robert 3225 Marshall Road Overland, Mo.	748	765 Rosen, Robert 3225 Marshall Road Overland, Mo.	749	766 Rosen, Robert 3225 Marshall Road Overland, Mo.	750	767 Rosen, Robert 3225 Marshall Road Overland, Mo.	751	768 Rosen, Robert 3225 Marshall Road Overland, Mo.	752	769 Rosen, Robert 3225 Marshall Road Overland, Mo.	753	770 Rosen, Robert 3225 Marshall Road Overland, Mo.	754	771 Rosen, Robert 3225 Marshall Road Overland, Mo.	755	772 Rosen, Robert 3225 Marshall Road Overland, Mo.	756	773 Rosen, Robert 3225 Marshall Road Overland, Mo.	757	774 Rosen, Robert 3225 Marshall Road Overland, Mo.	758	775 Rosen, Robert 3225 Marshall Road Overland, Mo.	759	776 Rosen, Robert 3225 Marshall Road Overland, Mo.	760	777 Rosen, Robert 3225 Marshall Road Overland, Mo.	761	778 Rosen, Robert 3225 Marshall Road Overland, Mo.	762	779 Rosen, Robert 3225 Marshall Road Overland, Mo.	763	780 Rosen, Robert 3225 Marshall Road Overland, Mo.	764	781 Rosen, Robert 3225 Marshall Road Overland, Mo.	765	782 Rosen, Robert 3225 Marshall Road Overland, Mo.	766	783 Rosen, Robert 3225 Marshall Road Overland, Mo.	767	784 Rosen, Robert 3225 Marshall Road Overland, Mo.	768	785 Rosen, Robert 3225 Marshall Road Overland, Mo.	769	786 Rosen, Robert 3225 Marshall Road Overland, Mo.	770	787 Rosen, Robert 3225 Marshall Road Overland, Mo.	771	788 Rosen, Robert 3225 Marshall Road Overland, Mo.	772	789 Rosen, Robert 3225 Marshall Road Overland, Mo.	773	790 Rosen, Robert 3225 Marshall Road Overland, Mo.	774	791 Rosen, Robert 3225 Marshall Road Overland, Mo.	775	792 Rosen, Robert 3225 Marshall Road Overland, Mo.	776	793 Rosen, Robert 3225 Marshall Road Overland, Mo.	777	794 Rosen, Robert 3225 Marshall Road Overland, Mo.	778	795 Rosen, Robert 3225 Marshall Road Overland, Mo.	779	796 Rosen, Robert 3225 Marshall Road Overland, Mo.	780	797 Rosen, Robert 3225 Marshall Road Overland, Mo.	781	798 Rosen, Robert 3225 Marshall Road Overland, Mo.	782	799 Rosen, Robert 3225 Marshall Road Overland, Mo.	783	800 Rosen, Robert 3225 Marshall Road Overland, Mo.	784	801 Rosen, Robert 3225 Marshall Road Overland, Mo.	785	802 Rosen, Robert 3225 Marshall Road Overland, Mo.	786	803 Rosen, Robert 3225 Marshall Road Overland, Mo.	787	804 Rosen, Robert 3225 Marshall Road Overland, 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headlines

UNDER THE DEADLINE

The Ecuador Government has taxed airlines five percent of their income from passenger traffic and an additional sucre (7½ cents) for each passenger entering or departing from the country, or landing in transit. Revenue from this source will be used exclusively for construction for Ecuador's Navy air service. . . . Meanwhile, the Congress of Guatemala has passed a law for a tax of eight percent on all plane tickets for travel outside the country, and four percent on domestic traffic. It is understood that these revenues will go toward airport and facilities maintenance. . . . Westinghouse Electric Corporation has developed for the Navy an electrically driven "slingshot" which will catapult a plane into the air after a run of only a few hundred feet. It is known as the "electropult."

It is reported that the Central Air Transport Corporation, a Chinese Government airline, has been able to purchase some 150 Army transport planes at a low figure because these aircraft were classified as salvage. The real fact is, the report states, that many of the planes were in good condition. . . . Gloster Aircraft officials claim a new altitude record with the recent flight of a jet-propelled Meteor to a height of 46,500 feet during a test. . . . It is estimated that approximately 10,000 persons were flown to Saratoga, New York, to attend the races there. Most of the planes serving Saratoga during the season were flown by non-scheduled operators.

Two B-17 Drones, controlled by radio from another aircraft, recently landed at the Muroc Lake Army Air Base, California, after a 2,174-mile flight from Hawaii. This was a new mark set for remote-control aircraft flying long distances. . . . Oswald Ryan, vice chairman of the Civil Aeronautics Board, feels that the abandonment of the British of the principles embodied in the Bermuda Air Agreement with the United States (see February, 1946 issue of this magazine) wrecked the negotiations for an air pact with Mexico, which he directed in Mexico City, and threatens to imperil the whole development of

international air commerce. . . . Negotiations are being resumed by New Zealand with the United States for an agreement to institute air service between Auckland and San Francisco, paralleling the Pan American Airways route. The service would be operated by British Commonwealth Pacific Airlines.

The Russians have unveiled a new jet-propelled fighter and two rocket-propelled fighters, plus two helicopters. Details are lacking. . . . The United Nations and the Provisional International Civil Aviation Organization are scheduled this month to negotiate a draft agreement whereby PICA0 will become a specialized agency of UN. . . . Taylorcraft Aviation has announced reductions of from \$250 to \$295 in the prices of its custom, de-luxe, and standard models of the BC-12-D.

Permanent quarters of the Institute of Air Transportation have been established at 34 East 39 Street, New York.

Fulton M. (Skeeter) Moore, general manager of Palwaukee Airport, Wheeling, Illinois, established a new altitude record for the Ercoupe when he flew to a height of 21,500 feet. The plane's official service is 14,000 feet. . . . The fourth annual National Aviation Clinic, scheduled to be held in Oklahoma City on October 14-17, expects to attract more than 1,200 persons in industry, education, government, commerce, as well as the general public. It will be under the joint sponsorship of the National Aeronautic Association and the Oklahoma City Chamber of Commerce.

One of the first commercial shipments by air of automobiles was handled by TWA when two Crosley cars were flown from the Cincinnati factory to R. H. Macy's in New York. . . . Trans-Canada Air Lines points out that its new four-motored craft, North Star, "is a truly international craft." It was built in Canada, "is partly of Douglas (American) design, and is powered by British Rolls Royce Merlin engines. . . . Belgium, Canada, Denmark, France, Iceland, Ireland, Netherlands, Norway, Portugal, Spain, Sweden, the United Kingdom, and the United States have been invited by PICA0 to participate in a conference to arrange for the establishment and operation of a network of 13 ocean weather stations in the North Atlantic region.

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CAB Reports Good Response To Non-Scheduled Filing

Non-scheduled air carriers have been filing registrations with the Civil Aeronautics Board under Section 292.1 of the Economic Regulations, at a lively rate. With the 3rd of this month as the deadline, the Operations Division of the CAB's Economic Bureau reported registrations as coming in at a five- to 10-a-day clip. At this writing it was estimated that nearly a half of the larger uncertificated operators had registered.

Waterman Adds London To List of Overseas Flights

Two round-trip flights between New York and London, using new DC-4 equipment are scheduled for this month by Waterman Airlines. The plane used on these flights is the one which has made several trips between New York and Puerto Rico, New Orleans and Puerto Rico, and San Francisco and Honolulu. On the transatlantic flight to the British capital the run is made with one three-hour stop at Gander, Newfoundland.

Foreign Permits Okayed

Two Colombian airlines—Lineas Aereas TACA de Colombia and Aerovias Nacionales de Colombia (Avianca)—have received foreign air carrier permits from the CAB for routes into the United States. Altogether 14 such permits have been granted.

TOP MEN OF FLORIDA CONTRACT AIR CARRIERS

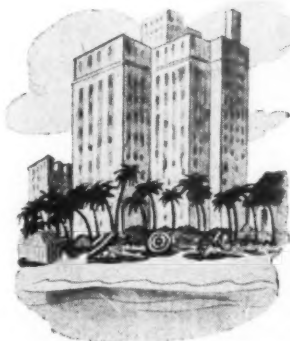


Shown left to right are the officers of the newly organized Contract Air Carriers Association, Inc., a group formed by non-scheduled airline men in the Miami area: E. B. Beese, secretary; William Hutchins, treasurer; John Yandell, president; and Charles Carroll, vice president and chairman of the Executive Committee. Seated is Emmett Choate, counsel. At the present time CACA is fighting legislation now pending by the CAB, as well as attempting "to get an equal operating deal from the local Dade County Port Authority, which controls the International 36th Street Airport in Miami."

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AIR CARGO PERSONALITIES

PAUL W. PATE

*Air Cargo-Air Mail Manager
Delta Air Lines*

PAUL W. PATE, who heads Delta Air Lines' air cargo and air mail department, is probably the youngest cargo manager in the airline business. At 30, Pate is a thoroughgoing veteran of the freight game, a promotion ladder-climber through the ranks of the motor carriers, and a graduate into the air cargo business.

Pate was born in Savannah, Georgia, January 2, 1916, the son of the late Chatham County tax collector. He was educated at the Savannah High School and the University of Georgia Evening College, having taken a commercial law course at the latter.

After the completion of his schooling, Pate joined the Barnwell Freight Line, of Burlington, North Carolina, as a lowly billing clerk. After three years in North Carolina, he accepted the position of chief rate clerk with Transportation, Inc. When the M and A Freight Lines was purchased by Transportation, Inc., during the depression, Pate was not only retained, but he was promoted to general traffic manager of M and A. In 1940 he was transferred back to Transportation, Inc., and promoted to Southern Division general traffic manager.

Pate accepted the assistant general traffic managership of the large Mason and Dixon Lines, Inc., in 1941, and made his headquarters in Kingsport, Tennessee. He resigned in May of 1942 to return home and join the Army. With the exception of a brief interlude as an aviation cadet in the United States Army Air Forces, Pate has always been a part of the freight world. After serving as a student of Army flight training for sev-



eral months, Pate requested a transfer to the ground component of the Air Forces. Two cases of pneumonia within a few weeks grounded him.

His resignation as an aviation cadet was accepted. He was appointed a master sergeant and assigned to the Courtland (Alabama) Army Air Base as sergeant major of transportation. The Army provided Pate with his best experience in rail transportation.

In November, 1943, he was given a medical discharge and returned to civilian life. Pate had aimed his sights during his Army career, and after his discharge he went gunning for Delta Air Lines in Atlanta. Because he wanted air freight work and Delta had no such a department, Pate's first reaction on arriving at the airline was that he had failed. However, after a few questions and answers with the Delta personnel man, he realigned his sights and started out again.

Drawing on his excellent motor freight experience before joining the Army, his rail transportation experience while in

the service, and his earnest desire to get a foothold in air freight some day, Pate accepted a counter Delta offer to become a traffic analyst in the planning and research department. For several months he assisted the airline in the preparation of briefs for Civil Aeronautics Board route requests, and in general duties in the planning and research department.

And Pate preached the gospel of air cargo and air freight. He seldom allowed a chance to pass without glowing predictions for moving heavy cargo by air.

A year after joining Delta, Pate's hopes and predictions began to come true. In November, 1944, Delta formed its first air cargo department, and the young man in planning and research whose faith in air freight had never sagged was selected to head the new department. On August 15, 1946, another of Pate's predictions came true when Delta entered the air freight business. His department suddenly grew from a one-man office to one directing freight men in many of Delta's principal cities, in addition to a greatly enlarged office at the Delta headquarters.

During a recent interview, Pate again made a prediction. His latest is that within 10 years air cargo traffic will outstrip passenger traffic as a source of revenue for airlines. AIR TRANSPORTATION will back him on that.

EAL to Providence

Eastern Air Lines will inaugurate regularly scheduled flights into Providence, Rhode Island, on September 3. Twin-engined DC-3s will be used.

Swenson Coins Word

Lowell Swenson, executive vice president of the National Aeronautics Association, suggests the term "feeport," to be used by private flyers to designate any airport charging landing fees for personal planes which use its facilities.

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William A.



Lee H. Swenson



Thomas V.



J. H. Swenson



Paul E. Swenson



Merrill Swenson



William A. Blees



Lee H. Smith



Thomas Wolfe



J. H. Smith, Jr.



Paul E. Reinhold



Merrill Manning, Jr.



★ EXECUTIVE ★

WILLIAM A. BLEES, vice president in charge of sales for Consolidated Vultee Aircraft Corporation, elected to the board of directors. He joined Convair after resigning as vice president of Young and Rubicam, Inc. Blees formerly was vice president in charge of sales for the Buick, Oldsmobile, Pontiac Sales Company Division of General Motors, and general sales manager of Nash Motors, Nash-Kelvinator Corporation.

LEE H. SMITH, appointed executive vice president of Aeronca Aircraft Corporation. He joined Aeronca six years ago as vice president in charge of sales and engineering. During the past three years Smith took a leave of absence to become general manager of the Burlington, North Carolina division of Fairchild Engine and Airplane Corporation which was then engaged in military production.

THOMAS WOLFE and **J. H. SMITH, JR.**, elected to the respective posts of vice president in charge of the Pacific-Alaska Division and vice president in charge of the Atlantic Division for Pan American World Airways. Wolfe is a well-known figure in aviation circles. He recently resigned as vice president of Western Air Lines. Smith was a State Department specialist in aviation before joining PAA. During the war he served as a Navy pilot and achieved the rank of lieutenant commander.

PAUL E. REINHOLD, prominent Southern business and civic figure, elected to the board of directors of Eastern Air Lines. He was a member of the Federal Dairy Industry Advisory Committee, War Food Administration, and represented the United States Government at the decennial meeting of the International Dairy Congress in Europe.

PHILIP D. ARMOUR, Chicago business leader, who fills a vacancy on the board of Northwest Airlines. Formerly associated with Armour and Company, he is at the present time an executive of several corporations.

NEIL B. BERBOTH, formerly of Fairchild Engine and Airplane Corporation, appointed vice president-traffic and sales of State Airlines, Charlotte, North Carolina. The airline was recently recommended by the CAB to engage in air transportation in Kentucky, the Virginias, the Carolinas, and Ohio. Berboth has also been connected with American Airlines and Northeast Airlines.

FRED L. CLARK, named assistant to the president of TACA Airways. He formerly held the post of assistant to the treasurer of the system.

MERRILL MANNING, JR., appointed senior transit coordinator for Pan American's Atlantic Division. He will be field executive coordinating all activities on transit *Clippers* currently flying to Eire, Belgium, Czechoslovakia, Austria, Portugal, Liberia, and Belgian Congo. He has been with PAA since 1942.

VINCENT PAUL CONROY, who has joined American Air Express Corporation as special consultant. Conroy was president of the Air Traffic Conference of America in 1943.

★ ADVERTISING ★ PUBLIC RELATIONS

HOWARD J. SILBAR, named coordinator of advertising and public relations for Lear, Inc. Before entering the service in 1942, Silbar worked in the advertising and public relations department of Burroughs Adding Machine Company. Prior to that he was correspondent for several national business papers.

CHARLES E. MCGEE, appointed press relations manager for Pan American's Atlantic Division. Prior to his present position, he was a sports writer for *The New York Times* and assistant director of publicity in a United States Maritime Commission shipyard.

SELBY CALKINS, new public relations manager for PAA's Pacific-Alaska Division. Identified with the aeronautical industry for more than 15 years, Calkins was recently Western editor of *Skyways*.

JOSEPH E. LOWES, JR., director of public relations of the Fairchild Engine and Airplane Corporation, elected chairman of the National Public Relations Advisory Committee of the Aircraft Industries Association. He succeeds A. M. Rochlen, director of public relations of the Douglas Aircraft Company.

★ TRAFFIC ★

COLONEL K. D. MCKENZIE, named to the newly created position of agency and interline manager for Northwest Airlines. During the last year of the war McKenzie directed the movement of all troops and supplies in the Mediterranean theatre.

S. WALTER LINCOLN, appointed Midwest district manager for the Chicago area for Swedish Intercontinental Airlines. Until recently Lincoln was associate director of the Society of International Travel Associates. He has been in the transportation field for 17 years.

FRANK H. MATTIX, **THOMAS J. WHITE, JR.**, **JAMES P. FARRELL**, and **RALPH K. MULFORD**, who have assumed new posts at Eastern Air Lines. Mattix has been appointed district manager in Philadelphia; White has been promoted to agency manager in the Great Lakes Division; Farrell has been transferred from Mexico City to take over the city managership of EAL's Houston office; and Mulford has been elevated to city manager in Boston.

★ CARGO ★

GUY M. SPRINGER, JR., formerly air cargo manager for Braniff International Airways, named director of cargo sales for Capital Airlines-PCA. A native



Howard J. Silbar



K. D. McKenzie



S. Walter Lincoln



Guy M. Springer, Jr.



Robert Kinzel



Mark J. Maidel

of Fort Worth, Texas. Springer is a member of a family which has long been affiliated with the transportation and shipping business. Springer's complete biography will be featured in a forthcoming issue of *Air Cargo Personalities* in this magazine.

KEITH JONES, appointed assistant cargo traffic manager for Western Air Lines. With WAL since March, 1944, Jones formerly served as local district cargo manager for the Los Angeles area.

★ PASSENGER ★

KAROLYN DIXON and **BARBARA BALL**, promoted to the respective posts of chief stewardess and assistant chief stewardess for Delta Air Lines. Miss Dixon has been with Delta since July, 1943; Miss Ball recently was discharged from the Army Nurses Corps, serving overseas.

★ SALES ★

ROBERT KINZEL, appointed assistant to the United States sales manager of Pan American. Assisting Arthur C. Doyle, Kinzel will be in charge of *Clipper* express sales.

★ OPERATIONS ★

MARK J. MAIDEL, former Army Air Force lieutenant colonel, named United States regional operations manager of the Scandinavian Airlines System. He recently participated in the demonstration of maintenance techniques and operating procedures applicable to the *Constellation*, conducted under the auspices of the CAA. During the war he was recognized as an expert on the AAF's big planes.

DON G. MacDONALD, 17-year veteran in air transportation, appointed manager of ground operations for United Air Lines' Eastern Region. MacDonald has been with UAL since 1929. He served as a lieutenant colonel in the AAF, returning a year ago after three years' service.

Mercury Airfreight Seeks Freight Forwarder Permit

Mercury Airfreight Corporation, which currently is transporting air cargo between Los Angeles and New York on a daily basis, will file an application with the Civil Aeronautics Board to be certificated as an air freight forwarder.

Organized in Los Angeles, Mercury recently began operations as a general agent for air cargo shippers. The corporation operates none of its own planes, but uses for the most part the services of the non-scheduled airlines. A certain portion of its freight is carried by the certificated airlines' cargo planes. Mercury's aim is to handle every phase of air cargo shipping with the single exception of actual flying.

The corporation is headed by **Frederic M. Blow**, who also is president of the Mexican airline, Red Aerea Mexicana, S. A., and a director of Aero Industries Corporation, New Haven. Vice president-traffic operations is **Nile O. Greer**; and vice president-sales and transportation, **W. L. Thompson**. The two vice presidents are partners in the Greer-Thompson Company, a Los Angeles traffic management firm. **W. W. Goldsborough**, president of the Midland Aircraft Company, Wichita,

Air Mail Era

(Continued from page 8)

by two factors. First, Congress gave two salary increases. I think they were justified in doing so, and I voted for the first one. If I had been in the Congress when the second was considered I would have voted for that also.

The second reason is the one I want to discuss in the following paragraphs. It is the loss of volume in the profitable first-class surface mail and air mail that has reduced the revenue of the postal service.

Air mail has dropped 50 percent. This is due to the demobilization of the armed services. It is not necessary to write to the boys; they are at home, for which we are all thankful.

With the new nickel rate for air mail, we are confident that a much greater volume can be secured. If so, it will increase the revenue of the Postal Service. It will help wipe out the deficit. If this deficit remains, some one will start a movement to reduce employment in the Postal Service. He may even try to reduce salaries. A campaign will soon be started by the Postmaster General to increase the sale of air mail postage. It will help the Postal Service and all its personnel.

Next year we hope to see legislation passed providing a system of air parcel post. That will certainly benefit the rural sections. If a farmer needs a part for his tractor or some other useful article, he can get it quickly. He also can sell eggs, baby chicks and other things, and ship them by air parcel post.

and a member of the New York Stock Exchange, is secretary-treasurer of Mercury Airfreight Corporation.

Other air forwarder applicants are: Airways Freight Forwarding Company, 2201 Grand Avenue, Kansas City; Air Cargo Coordinators, Cleveland Municipal Airport; Domestic Air Express, 1025 Mateo Street, Los Angeles; Nation-Wide Air Freight, Inc., 39 West Adams Street, Chicago; Skyways Freight Forwarding Corporation, 152 West 42 Street, New York; and Western Air Freight Forwarders, Inc., 15 Brook Street, Jersey City.

Beech Bonanza

(Continued from page 20)

flight instruments for day and night flying; radio receiver, transmitter, marker beacon receiver, homing loop, and automatic antenna reels; cabin heating and ventilating system, with windshield de-icers; soundproofing; continuously variable controllable pitch propeller; navigation, cabin, instrument, and landing lights; four adjustable sunshades, four individual ashtrays, and cigarette lighter.

Boeing Stratofreighter

(Continued from page 12)

the *Stratofreighter* can be fully loaded in as little time as 50 minutes.

In addition to the maindeck space which is loaded by means of an electric hoist and power-aided overhead traverse rail, the *Stratofreighter* has three lower-deck compartments. Equipped with truck bed level doors to facilitate single-motion loading, these holds are ideally suited for short-range hauls where cargo is shifted frequently at intermediate stops.

The plane has also inherited the aerodynamic efficiency of its wartime predecessor, the Boeing B-29 *Superfortress*. It has been equipped with the same high-lift, low drag wing which carried the *Superforts* over thousands of miles of the Pacific; flush rivets, spot welding, and butt-jointed skin make possible speeds up to 350 miles an hour. The sum total of the *Stratofreighter's* aerodynamic efficiency enables the Boeing cargo carrier to do more work for its weight and size than any other air freighter in operation.

Efficiency, however, is not a bargain item. Weeks, months, sometimes even years are spent in research and engineering development — often times on seemingly small but actually difficult refinements. Other time-consuming problems bear directly on basic design considerations.

Increased payload, for example, is inherent in light construction. Once the gross weight has been established—say at 135,000 pounds—the fewer pounds used in the airplane itself the more available for payload. Although a simple formula, the problems introduced are of considerable magnitude. For while it is relatively easy to design light structure, to do this and at the same time include the Boeing hallmark of structural stability and strength, is not as easily accomplished. To incorporate both, as has been done in the *Stratofreighter*, takes time to design and manufacture. In the aircraft industry, as in all others, time costs money, hence the million-dollar price tag on the new Boeing cargo carrier.

Reduced rates, the key to success of the coming ship-it-by-air era, stem directly from efficient equipment. With its tremendous usable volume of 6,140 cubic feet — twice that of an average railroad box car — the *Stratofreighter* will reduce by 20 percent the lowest direct-cost air freight figure announced to date. Converted to weight, the available volume represents 41,000 pounds of payload.

To airline operators, the results of reduced rates—increased business and additional profit—are of top interest.